The Builder.

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ILLUSTRATIONS.

Church of Brou-en-Bresse, Bourg :—
West Front ..... *Single-Page Tone Block.*
Detail of West Doorway ..... *Single-Page Tone Block.*
The Choir Screen ..... *Single-Page Tone Block.*
Tombs of Margaret of Austria, Philip le Beau, and Margaret of Bourbon ..... *Single-Page Tone Block.*
Tomb of Margaret of Austria ..... *Single-Page Tone Block.*
Tomb of Margaret of Bourbon ..... *Single-Page Tone Block.*
Dépôt Centrale du Matériel des Postes et Telegraphes, Paris ..... *Double-Page Ink-Photo.*

CONTENTS.

The Church of Brou-en-Bresse, Bourg 331
The Report on the L.C.C. Works Committee 332
Notes 333
The Architectural Association 334
Magazines and Reviews 339
New Government Laboratory 339
The Church of Brou-en-Bresse, Bourg 340
The "Depot Centrale des Postes et Telegraphes," Paris 342
Architectural Societies 340
Engineering Societies 340
The Sanitary Inspectors' Association 341
The London County Council 341
Builders' Clerks' Benevolent Institution 342
Architecture on the Bedford Estate 342
Venner *v.* McDonell 342
St. Nicholas, Keyingham 343
A Party-Wall Question 343
The Student's Column: Specifications.—XV.—Electric Wiring 343
Obituary 344
General Building News 344
Sanitary and Engineering News 345
Stained Glass and Decoration 345
Foreign 346
Miscellaneous 346
Capital and Labour 346
Legal 347
Meetings 347
Recent Patents 347
Some Recent Sales of Property 347
Tenders 349

The Church of Brou-en-Bresse.

IN a suburb of the little town of Bourg, in Burgundy, twenty-three miles from Mâcon, en route to Mount Cenis and Turin, is one of the most remarkable of the later Gothic churches of Europe, built at that interesting period when architecture was in rapid transition from Gothic to Renaissance. It derives additional interest from the fact that it is all of one date and style; there is no break in the unity of the design; architecture, statuary, tombs, stalls, pulpit, roodscreen, reredos, glass, pavements, were all executed between 1511 and 1536. It is a monument and memorial of the love and piety of Margaret of Austria, for her mother-in-law, Margaret of Bourbon; and yet more for her husband, Philibert, Duke of Savoy. The story, well known through Arnold's poem, is that Philip II., Duke of Savoy, broke his arm when hunting, in 1490; and Margaret, his wife, vowed to build a Benedictine abbey and church if he recovered. He recovered; but she died three years after, before she could fulfil her vow. Her daughter-in-law thereupon undertook to accomplish the project of the Duchess.

Margaret of Austria, the real foundress, played a very important part in European affairs; and her office of Governor of the Netherlands brought her into close connexion with the foreign policy of our own country. She was the daughter of Maximilian I., Emperor of Germany, and Archduchess of Burgundy; the Emperor, Charles V. of Spain, was her nephew. This explains the Imperial scale and splendour of the church; its location in Burgundy; and the fact that it is a Flemish church, indeed, almost the only Flemish church in France. Margaret sent her own subjects from the Netherlands to do the work; architect, sculptors, and probably the workmen, were Flemish. The architect was Van Beughen, or Van Boglem; he is said to have copied, but to have greatly improved on, the work of Antwerp Cathedral. The chief sculptor was Conrad Meyt. There has been found at Lille the original agreement between the foundress and Conrad for the execution of the statues of Philip and the two Margarets; it is dated 1526; its specifications are closely followed in the existing tombs. The whole church is a memorial to the love of Philip and the two Margarets; the initials P. and M. are everywhere, interwoven with daisies or constructed of the cordon which the Duke was entitled to wear. Everywhere daisies, or rather, marguerites, are carved; in fact, the whole church is a glorification of marguerites. There is still kept up the pretty custom of adorning the altars with marguerites; all the year round marguerites are grown for the purpose in the adjacent convent. Constantly repeated, too, is Margaret of Austria's proud punning motto: "Fortune infortune forte une," which one may English: "Come weal, come woe, I fear no foe." Margaret did not live to complete her work, and it was handed over to Augustinian instead of Benedictine monks. To save the church from the destruction in the French Revolution, by which it was menaced, it is said to have been filled with hay by the people of Bourg. It is now a National Monument; and was sumptuously restored by M. Dupasquier, who published a large monograph on it, containing plan and details and some fine chromolithographs of the pavement and the glass. In 1856 the vaults were discovered, belonging to the three tombs, and it was found that the two Margarets had not been buried in their own vaults, but in that of Philip le Beau. "In their deaths they were not divided."

The church is, internally, 230 ft. long, 98 ft. 6 in. broad, and 65 ft. 6 in. high. It consists of a southern tower, nave, aisles, and chapels of four bays; transept of two bays, with eastern aisles; choir and aisles of three bays, and pentagonal apse. On either side of the choir are magnificent stalls; it is separated from the nave by a broad and massive rood-screen (see illustrations; plate 3). In the middle of the eastern part of the choir is the tomb of Philip le Beau; it is the cynosure and masterpiece of the whole building; but owing to the heavy railings which surround it it is inacessible to the photographer. (Plate 4.) Above, on a slab of black marble, rests the duke, an effigy in white marble, represented in all the pomp and splendour of life, in armour, his head resting on an embroidered cushion, a lion at his feet gripping the scabbard of his sword in most life-like fashion. On his left is the tomb of the foundress, Margaret, his wife; towards her his head inclines. On his right is the tomb of his mother, Margaret of Bourbon; his clasped hands lean towards her. The slab rests on twelve pillars, exquisitely sculptured and containing figures of the Sibyls in alabaster. Round him stand six delightful little boys in white marble, bearing epitaph and arms; the Pagan genii of the Renaissance. Below he appears dead, shorn of all his mundane splendour, a corpse, naked, but for a cincture round the waist; a wonderful study in anatomy. Both the other tombs have canopies. (Plates 5 and 6). That on his right represents Margaret of Bourbon; above, with ducal mantle, and with crown on her head, her greyhound at her feet, her face turned towards her son; below, she appears in her shroud, dead, with hair unbound. The tomb on his left is that of the foundress, represented also above, as in life, below, in death. In the Lady Chapel, which occupies the eastern bay of the north aisle, is a marvellous reredos in alabaster—18 ft. high and 13 ft. broad; and so deep that it admits, among other things, of a representation of Our Lady's four-post bedstead, whose frieze and cresting are curiously like Elizabethan work. The reredos contains scenes from the life of the Virgin; its great dimensions, and the wealth and minuteness of the work in it, remind us of the retables of Spain, of which, at that time, the Netherlands were a dependency. In the same chapel is a superb window, representing the Assumption of the Virgin; the Father and the Son are shown in most realistic, but reverent fashion, placing the crown on her head. The glass of this window is in drawing and colour one of the finest examples of later work. Magnificent heraldic windows are to be seen in the choir; two of them are shown in colours by M. Dupasquier, who has an admirable plate of the pavement, chiefly pale blues and pale greens. Carved work is everywhere. Capitals, archivolts, the mouldings of piers, buttresses, and ribs, gables and cornices, windows and doors, are a mass of leafage and bloom, always solid, massive, and vigorous, always original and interesting. Equally spirited is the zoology; a kid munching a cabbage-leaf, a lion's cub wearily yawning, a crowd of little beasts scratching their wings or biting their tails, monsters bearing up heavy gargoyles, dwarfs

and masks grimacing, sleeping, playing, eating, drinking, reading, meditating, praying, all alive. Less Gothic, but still more beautiful, is the figure sculpture, especially the mourners round the base of the tombs. They comprise the Sibyls as well as the saints who were patrons of the defunct. Thanks to the strong iron railings, this work is in a remarkable state of preservation.

The church of Brou is compared by Mr. Fergusson with the chapel of San Juan de los Reyes at Toledo, built by Ferdinand and Isabella for themselves, and with Henry VII.'s chapel at Westminster. All are royal sepulchral chapels; they are nearly contemporaneous; their founders were among the richest and most prosperous sovereigns in Europe. All that wealth could do was lavished on their ornamentation. With these great sepulchral chapels Gothic architecture perished, not in decadence, but in meridional splendour. The interior of Brou is simple and, on the whole, restrained, though Van Boglem could not resist the temptation of turning the trefoils in the parapet of his rood-screen upside down, by way of novelty. (Plate 3.) It is just this desire for novelty which makes the last days of Gothic so fascinating to many of us just now. In the crowning and culminating period of Gothic architecture there is much uniformity. After Amiens and Rheims one knows what to expect at Beauvais and Cologne; after the Percy shrine at Beverley, there is no great novelty in the arcading of the Lady Chapel at Ely. The charm of the unexpected is absent. But at periods of transition—as from Romanesque to Gothic, between 1245 and 1300, and from Northern Gothic to Renaissance in the sixteenth century—one never knows what to expect; there is no longer any recognised legitimate path; every one is experimentalising; men are obliged to use their wits; the work is fresh and original and vigorous; always interesting, however wrong-headed. In Brou, however, after all, there is, setting aside the figure sculpture, very little Renaissance feeling. It is really a late Gothic design produced by a clever man too proud and ambitious to be a mere copyist; anxious to show off his cleverness; determined at any cost to be original. See how he plays with the façade. (Plate 1). It is simply a series of little jokes in stone. The restraint which he has to some extent imposed upon himself in the interior of the building, he throws to the winds in the façade. Take the tower. There would be no credit to be gained for originality if he had built two western towers as at Notre Dame de l'Epine, or one western tower as at St. Riquier, or three towers like those of St. Ouen, or a single central tower. So he locates his tower in an extraordinary position, south of the centre of the choir. Delightful, too, is the central gable with its gentle curves; while by way of contrast, the gables of the aisles are straight-sided, with flying buttresses plumped down anyhow on to the inner side of each. Then he designs for the window of the aisle-gable a spherical triangle; and finding that his flying buttress would thrust it out, he slices off one half, and just leaves it so. It is just these little quips and cranks which endear a late design to us; a man of genius may perpetrate them, but no one else. It was certainly a genius who designed the Church of Brou-en-Bresse.

THE REPORT OF THE L.C.C. WORKS COMMITTEE.

WE give on another page the recommendations arrived at by the majority of the members of the Special Committee appointed to inquire into the causes of the recent scandal in connexion with the Works Department of the London Connty Council. It will be seen that they affirm the principle that some definite organisation for the direct employment of labour and the direct execution of public works by the Council is desirable, but not exactly in the form of a works department. They evidently think that the Works Department is too numerous a body for the purpose of directing the carrying out of building work; moreover, that its constitution is very bad, as it is generally composed of two sections of members of about equal numbers who have opposite ways of thinking and opposite sympathies in regard to labour policy. That is only saying that the vice which has run through the whole attitude of the London County Council in regard to building work, that of thinking of the carrying out of a special social policy rather than of the best way of getting work done, has been present in the most marked form in the Works Committee itself. It would be strange indeed if large building works, especially of a complicated nature, were efficiently carried out under the management of a body so constituted. The Special Committee propose to substitute for this unwieldy and semi-political Works Committee a Works Board of nine members, one from each of nine committees named, and a Works manager, who would be subject to the control of the Works Board, would conduct all operations of the department, to whom estimates for proposed works should be referred, and who would report progress from time to time to the Board, which would in turn report progress to the Council. This would no doubt be an improvement on the Works Department, as hitherto constituted. The matter of the manipulation of the accounts does not turn out to be any worse than what we have heard of already, and has evidently arisen not from the desire of any one to put money unlawfully into his pocket, but merely from the desire to conceal the fact that in some cases the department was an economical failure, and that more instead of less money was being spent than would probably have been spent under the ordinary system of receiving tenders from outside contractors.

This, however, is all part of the same vice, that of making the execution of building work subservient to the demands of a policy. It is impossible to resist the conclusion that if the County Council, or a certain proportion of them, had not been so anxious to promote the cause of the working man, which may be a very good cause in itself but which they were not elected in order to support, better work and better terms, taken all round, would have been obtained from ordinary contractors, and there would have been no suggestion or excuse for the foundation of a Works Department at all. The County Council clogged their contracts with conditions which independent contractors did not like, and which some of them regarded as offensive to their self-respect as well as injurious to their business interests; contractors began to refuse tendering for County Council work; and then came the idea that if builders were recusant the County Council would be its own builder, and carry on work in accordance with its own policy.

We do not think that either the Council or the ratepayers have reason to be very well satisfied with the result, nor do we feel particularly satisfied with the Special Committee's Report. It is a half-hearted document, evidently drawn up with the intention of making the best of a bad job. In our opinion the minority Report, issued by four members of the Committee, Mr. Beachcroft, Mr. J. S. Fletcher, Dr. Longstaff, and Sir Godfrey Lushington, is by far the most important document of the two, and gives the impression of representing the views of persons who want to say the truth about the question rather than to smooth matters over and prop up a particular policy. With this should be taken the special statement of Mr. Gruning, and we advise those who are interested in the subject to pay attention to these two documents, which are much more instructive than the main Report. Indeed, it is impossible to reconcile some of the opinions expressed in the main Report with some of the statements of fact made by Mr. Gruning. The Report quotes some statements of Mr. Gruning and omits others of equal importance. It quotes him as saying that the buildings erected under the Works Department "were structurally sound and substantially and well built," but omits all mention of his repeated condemnation of the joinery in the Council buildings, as roughly executed, made of unseasoned wood in many cases, &c. Why the failures should so specially be shown in the joinery it is not very easy to understand, but it seems to point partly to mistakes or carelessness in the purchase of material.

The general question as to whether public building works can be carried on by a Corporation with greater efficiency than through outside contractors is put thus by Mr. Gruning:—

"The initial difficulty which arises in carrying on works or factories by a Corporation is that no one can be made responsible in a pecuniary sense for non-success or loss, nor does any one derive profit from success otherwise than in reputation.

*In this sense the greatest incentive of all to success, viz., the desire of gain, is entirely absent.**

The desire, on the other hand, to escape moral liability for losses has been clearly shown by the incident of the fictitious transfers, which led to the appointment of this Committee of Inquiry.

I assume that the objects of a Corporation in carrying on works or factories for producing buildings or goods required in preference to contracting for or purchasing them, are twofold, viz.:—

1. To obtain better results as to quality.

2. To economise the funds with which a Corporation is entrusted by the ratepayers.

If neither of these objects is attained, the only result is the waste of time, thought, and labour devoted gratuitously to the service of a Corporation by the elected representatives of the constituency."

Mr. Gruning considers, in regard to the second question, that a Works Department ought to save the profit of the contractor; but the statistics given certainly do not tend to confirm this view. Some other light is thrown on this subject by the Minority Report. "A contractor would not have spent 40,000*l.* on workshops where no high-class work was to be done. . . . The workmen, and especially the skilled workmen, showed a lack of energy over their work, apparently considering that less was

* The italics are ours.

to be expected of them towards a municipality—a tendency which, in Mr. Binnie's opinion, can never be entirely overcome." With regard to trades-unions, and the position professedly taken up by the Council, that the interests of trades-unions and employers were to be equally considered, and that the Council was to hold the balance between unionists and non-unionists, the Minority remark "If this was the intention, we must say it has been but imperfectly realised."

An important point touched on in the Minority Report is in regard to the difference in the complication of architectural work as compared with such work as tunnels, sewers, &c., in consequence of which it is suggested that engineering works of that nature may be successfully carried out by a Works Department, but not architectural works.

The following are the recommendations of the Minority Report :—

"1. That the Works Department be placed under the Chief Engineer.

2. That no works, whether estimated or "jobbing," be undertaken which come within the definition of architectural works.

3. That the Works Committee be abolished.

4. That the Chief Engineer be responsible to the Spending Committee for the execution of all works undertaken by the Council.

5. That for the purpose of financial control a Sub-Committee of the Finance Committee be formed, to be styled 'The Works Branch of the Finance Committee.'

6. That all materials be purchased by the Chief Engineer, who shall be responsible to the Finance Sub-Committee for the same and also for the custody of all stores.

7. That the Central works, so far as they are not required, be disposed of.

8. That the system of tendering by selected firms be adopted wherever practicable.

9. That the form of contract be revised so as to remove the main objections raised before the Committee on behalf of the contractors.

10. That the above recommendations be not held to restrict the Parks Committee from undertaking, with the sanction of the Council, such works as have hitherto been carried out by that Committee."

We confess that we think this is much the more sensible and practical Report of the two, and its recommendations much more in the public interest.

NOTES.

The Threatened Railway Strike.

THE North-Eastern Railway Co. and all concerned are to be congratulated upon having steered clear of a great strike. Since we referred to the matter a few weeks ago,* the fate of the arbitration proposals has several times trembled in the balance; and a very little "stiffening" on either side might have resulted in a prolonged and bitter struggle. It is, therefore, greatly to the credit both of the management and the men that they refrained from adopting an unyielding attitude, eventually agreeing to submit most of the disputed points to arbitration. This decision will come as a great relief to the North-Eastern shareholders and to the commercial community of the districts affected, the latter of whom have just had a foretaste of the disastrous results of a suspension of work, while the former are not likely to have forgotten the effect upon their dividends of former great labour struggles in the North of England. Nor will the general public neglect to note with satisfaction the decision to resort to arbitration, as affording another proof that the superiority of common-sense methods of approaching disputes of this nature is becoming increasingly recognised.

* See p. 215, *ante*.

National Festival Grounds for Germany.

REFERRING to the Kyffhäuser Monument, illustrated in the preceding number, we observe, from our official German contemporary, the *Centralblatt der Bauverwaltung* of Saturday last, that there is a scheme on foot to arrange some extensive grounds for the purposes of great fêtes and ceremonies, and also for athletic competitions, somewhat like the Olympia ground at Athens, and the site selected is in the valley at the foot of this memorial. The illustrations in the *Centralblatt* show a large amphitheatre facing the monument, and flanked by viaducts crossing the valley. Accommodation is to be provided for three or four hundred thousand people, and the dimensions of the ring proper are 470 mètres by 314 mètres. A special committee has been formed, in which Herr W. Boeckmann, late of the firm of architects Messrs. Ende & Boeckmann, together with Professor Bruno Schmitz, are among the more prominent members. A small pamphlet has been issued in their name, describing the object of this new institution.

The Future of the Paris Salons.

THE Municipal Council of Paris has formally recorded its vote in favour of the installation of the annual Salons, till after the 1900 Exhibition, in the garden of the Palais Royal. According to the approved scheme drawn up by M. Pinat, architect, the necessary structures will include two large parallel galleries terminated by four pavilions surmounted by small domes. These two galleries will be connected, in the middle of the garden, by a "Salle des Fêtes," of rectangular form, occupying the position now occupied by the central basin. These two galleries will contain thirty separate rooms with a total floor area of 4,094 square mètres, and a wall surface of 7,466 mètres. These constructions will only occupy about a fifth part of the area of the gardens, and will be designed to harmonise architecturally with the Palais Royal buildings. Other schemes have been presented by M. Delort de Gléon and M. Bivort, but they were passed over as more difficult to carry out and more costly.

The Theatre at Delos.

THE last number of the *Bulletin de Correspondance Hellénique* contains the full publication of the theatre of Delos recently excavated by the French. In addition to the detailed plan, two very interesting views of the present state of the ruins as now exposed are given. This theatre, as is well known, presents special peculiarities unparalleled elsewhere. The *skene* building is surrounded on all four sides by a colonnade, and shows no traces of having had any internal divisions. Moreover, unlike the theatres of Athens and Epidaurus, there are no *paraskenia;* this is the more noticeable, as inscriptions have been found relating to the theatre, in which *paraskenia* are mentioned. The inscriptions can only be explained on the supposition that temporary wooden *paraskenia* are referred to. The theatre of Delos is discussed in Dr. Dörpfeld's great work on the Greek theatre, to which we hope to return on a later occasion. His plans are necessarily not so detailed as those now given to the public. Dr. Dörpfeld finds in the Delos theatre new confirmation of his "logeion" theory, but in the *Bulletin* M. Chamonard arrives at a different conclusion.

Archæological Congress at Athens.

THE Congress of Classical Archæology which was to have been held this month at Athens, and to which we drew attention some weeks ago, is now definitely postponed till the autumn. M. Homolle, the Director of the French School, suggests the end of September or beginning of October, by which time it is hoped Cretan complications may be resolved. September will perhaps, as a vacation month, secure a larger attendance, but the autumn heat, which at Athens is intense, will be apt to paralyse effort, and is even not without risks to those unacclimatised. Meantime, the *Athenæum* of April 3 reports that the antiquities at Candia are in some danger. As among them are some very curious unpublished *pithoi* adorned with mythological subjects, this is much to be deplored.

Lord Rayleigh on Electricity.

IN last Saturday's lecture at the Royal Institution Lord Rayleigh first considered the various methods of measuring the frequency of rapidly alternating currents, and then showed some interesting experiments illustrating their action. He described a method of measuring frequencies as high as a million per second by means of a polished steel mirror and a photographic plate, the mirror being made to rotate rapidly by a powerful alternating current magnet. In a great many cases, however, the frequencies are so high that they can only be calculated mathematically from the known constants of the apparatus producing the vibrations, and cannot be actually measured. Hertz's experiment of how the light produced by the sparks from an induction coil increased the spark produced in a resonating coil near it, excited great interest. When a plate of glass was interposed the sparks ceased almost entirely, but when a quartz lens was used, so as to concentrate the ultra violet light on the spark gap, the sparks were large and brilliant. An experiment, due to Professor J. J. Thomson, was also shown, of how a coil, carrying a high frequency current, produced by electromagnetic induction a ring of light inside an exhausted bulb containing traces of vapour. In this case the path of the discharge was wholly gaseous, and there was no anode or kathode. Lord Rayleigh is certainly to be congratulated on the choice of his experiments, as they bring into prominence most interesting points connected with electrical theory.

Sanitary State of Chelmsford.

THE recent prevalence of typhoid fever and other infectious diseases in Chelmsford has led to the preparation of a special report to the local Government Board, prepared by Dr. Richard J. Reece. From this Report it appears that the main evil in Chelmsford is deficiency and (under some conditions of weather) uncertainty in the water supply, which is drawn from three sources, an artesian well and two natural springs. The artesian well has not yielded as much as was at first expected, and of the springs, one is liable to contamination, the other to fluctuation as to quantity. The distribution of water is very unsatisfactorily carried out (partly no

doubt in the effort to economise an inadequate supply); "many houses are supplied from a single cistern, furnished with a tap and placed in a yard common to the houses, or at some spot accessible to the inhabitants. When these cisterns are empty the people are without water, unless they have access to one of the many pumps of which mention will be made hereafter. In many houses that are separately supplied the cistern is placed over the closet, *and from this the domestic supply is drawn*, as well as the water for flushing the closet." The provision for excrement removal is not so bad as we frequently find recorded in such reports, but there is evidently a great deal that requires amending; badly constructed water-closets with insufficient supply of water; ashpit privies which, though cleared by the public authority, are not cleared often enough. But insufficient water supply is evidently the leading evil at Chelmsford. The pumps referred to in the above quotation—pumps drawing from private wells—are the resource of inhabitants who cannot get a sufficient or regular supply of water from the public sources; and the water of these private wells is often contaminated.

Electric Traction.

THE interesting paper by Mr. Baylor, on "Recent Developments in Electric Traction Appliances," which was read on Wednesday evening at the Institution of Electric Engineers, is a most important one. We have heard too much lately of the opinions of Town Councillors on electric traction after their trips abroad, and too little of expert testimony. Mr. Baylor first drew attention to the growing practice of driving the electric generator direct instead of by ropes or belts, and rightly pointed out that not only is the efficiency of the plant increased by direct coupling, but also, since it requires less space, the buildings may he smaller and less expensive. There are a few engineers who still consider the direct coupling of traction units unsafe practice, but seeing that there is some 300,000 h.p. of such machinery in successful operation, they will probably soon change their views. Mr. Baylor's remarks on the overhead trolly were thoroughly sensible, and devoid of any special pleading. His arguments in favour of alternating current systems as against three-wire systems we did not quite agree with. Professor Kennedy has recommended a three-wire system for the Brompton and Piccadilly underground electric railway. The most valuable and novel part of the paper was on electric brakes. The old emergency electric brake put a great strain on the motor and spur gearing; often the gear wheels were stripped and the armature burnt out. The new electric brake replaces mechanical brakes altogether; there is no wearing of the wheels by a brake-shoe, skidding is impossible, and there is very little strain on the gearing and armature.

"The Grasshopper," Lombard-street.

THE business with this sign, now known as "Martin's Bank," and previously as that of "Martin & Co.," is believed to be the oldest private bank in the City, and to represent the business house in that street of Thomas Gresham, whose crest forms its sign. The rear portion of the present premises, in Change-alley, was built in 1874, after the designs of Mr. R. Norman Shaw, R.A. They stand upon the site of the old "Garraway's" Coffee House, burnt, together with "Jonathan's" and "Robin's," in March, 1748. The late Mr. J. Biddulph Martin published, in 1892, an illustrated history of the firm, to which he was admitted as a partner in 1864. It is said that Matthew, father of Jane, Shore, goldsmith, kept his shop, more than four hundred years ago, on the spot where is now the bank's public office; there was a Martin, a goldsmith, in Queen Elizabeth's reign; but as the chronicle comes down to the times of Duncombe, Kent, the Blackwells, the Leavers, and the Stones it runs with a surer tale.

The Guildhall Exhibition.

THE Exhibition this year at the Guildhall has a special interest, as it is intended to be a representative exhibition of the art of Queen Victoria's reign. It is not in this respect a complete or all-round one, but it affords interesting opportunity of comparing one's present impression of works of the earlier period of the reign with the impression they made on their first appearance, and we shall return to it in this sense.

Minor Exhibitions in London.

THE exhibition of the New English Art Club at the Dudley Gallery is much as usual—a collection of ugly and eccentric works, with a few clever and powerful things interspersed among them. Mr. Furse has two or three brilliant and broadly-executed portraits, of which that of Mrs. Marshall (37) is the best as a picture, but the general effect is much better than the painting of the head and hands. Mr. Guthrie's "Vanity Fair" (70) lent by the Corporation of Glasgow, is an exceedingly clever sketch on a large scale, rather than a picture. One or two members have made experiments in architectural subjects; Mr. Walter Sickert sends a large elevation (one may call it) of St. Mark's, Venice, flat in appearance and dull in colour; Mr. G. Thomson paints Westminster Abbey with more force, though the picture certainly does not represent the colour or appearance of the building as we have ever seen it. Mr. Lindner's experiment with sea surface is not successful in "Christchurch Bay"; it looks like sea with patches of some coloured stuff floating on it. Among things that one could find pleasure in may be mentioned Mr. Fred Brown's "The Mirror" (87), a real picture; Mr. Buxton Knight's "Autumn's Threshold" (88), fine in colour though rather ragged-looking; Miss Fanner's "The Chestnut Tree" (98),with a fine sky and light in it; and M. Renoir's "Tête d'enfant" (115). At 14, Brook-street is to be seen a very different exhibition, that of about seventy works by Mr. Legros, full of originality, power, and expression. Among the five oil paintings "Femmes en Prière" was seen some years ago at the New Gallery; it is a most interesting and remarkable study of character and expression in faces and figures. The "Effet du Matin" is a fine and truthful representation of a landscape under early morning light, before sunrise. The drawings include many effective and original landscape studies, in a method peculiar to the artist—a mixture of wash and pen line; there are also some interesting studies of figures and heads. The two or three studies called "La Mort," each grouping a nude girl with a figure of Death, have a remarkable and weird effect, and are admirably drawn. The collection is one which should not be neglected.

Minor Exhibitions in Paris.

THE third exhibition of the "Pastellistes" is the most brilliant they have given. It includes about 150 pastels, of which the eleven exhibited by M. Besnard are among the most remarkable things he has ever produced. Among them the "Femme Drapée," the "Collier," and the "Jeune Espagnole" are especially fine, both in drawing and colour, and they are free from the tendency to sensational exaggeration which has often been the weak point in this artist's works. There are some fine portraits by M. Georges Callot, a good one by Mdme. Madeline Lemaire, some scenes in rustic life by M. Lhermitte, flower paintings by M. Elliot, and various admirable landscapes by MM. Pierre Lagarde, Billotte, Nozal, Montenard and Gaston Guignard. The "Artistes Independants" have also opened their exhibition in the Palais des Arts Libéraux, but of this the less said the better. This exhibition was formerly amusing, in a way, from its eccentricity, but now even this attraction has departed, and the collection is simply dull.

THE ARCHITECTURAL ASSOCIATION:

ARCHITECTURE IN RELATION TO THE CRAFTS.

AN ordinary fortnightly meeting of this Association was held on the 2nd inst., in the Meeting-room of the Royal Institute of British Architects, No. 9, Conduit-street, Regent-street, Mr. W. H. Seth Smith, Vice-President, presiding.

The minutes of the previous meeting having been read and confirmed, and Messrs. W. M. How and W. H. Purchase having been elected members of the Association,

Mr. E. Howley Sim, Junior Hon. Sec., proposed a vote of thanks to Mr. R. Greville Montgomery for allowing the members to visit the recent Building Trades Exhibition, and for providing tea on the occasion.

The vote of thanks having been cordially agreed to, and Mr. Banister F. Fletcher having announced some donations to the library, the Chairman read the House-list for the coming session, as follows:—

House-List for New Session.

President, Mr. H. W. Pratt; Vice-Presidents, Messrs. B. F. Fletcher and A. H. Hart; Committee (ten to be elected), Messrs. R. S. Balfour, W. D. Caröe, H. B. Creswell, A. S. Flower, F. T. W. Goldsmith, C. de Gruchy, F. G. F. Hooper, E. H. Parkes, H. Passmore, Beresford Pite, G. H. F. Prynne, W. H. Seth Smith, J. W. Stonhold, A. B. Thomas, and J. L. Williams; Hon. Treasurer, H. W. Pratt; Hon. Librarian, C. H. Freeman; Hon. Secs., E. H. Sim and G. B. Carvill; other officers: Hon. Solicitor, W. H. Jamieson; Hon. Assistant Librarian, E. W. M. Wonnocott; Hon. Auditors, M. Garbutt and H. P. G. Maule; Assistant Sec. and Registrar, D. G. Driver.

Mr. T. G. Jackson, R.A., then read the following paper, entitled "Architecture in Relation to the Crafts":—

It used to be the fashion for any one writing or speaking on architecture to cite Vitruvius as the authority for what he said. The writings of Vitruvius are no longer regarded by everybody as the gospel of architecture, and, indeed, are now perhaps rarely read by architectural students. And, yet, on the present occasion I cannot do better than take as a text the opening passages of his treatise which seem to apply very aptly to the subject for discussion to-night.

Vitruvius distinguishes at the outset between practice and theory in architecture, and goes on to point out that architects who are mere handicraftsmen without literary training are unable to give any reason for what they do, while those who trust only to theory and book learning without practical training seem to grasp at a shadow, and not reality.

An architect, he says, must be properly trained in both fields. He must be both ingenious and teachable, for neither will wit

without training, nor training without wit make the perfect artist. He must be a skilful draughtsman, a learned geometrician, not ignorant of optics, instructed in arithmetic, a good historian, and a diligent student of philosophy. He must understand music; he must know something of medicine; he must be familiar with the decisions of the lawyers; he must understand astrology and astronomy. This is a formidable programme, and if one might, without profanity, speak disrespectfully of a writer who has hitherto been considered almost sacred, one would almost be tempted to say he was writing nonsense. The first part of his list is, no doubt, necessary enough, and as to the latter part, when we come to his explanations, we find that they do not make so much demand on the student as at first sight they seem to do. The usefulness of his historical lore is to enable the architect to explain the meaning of some of his ornaments, and to tell the inquirer that the figures of Caryatides which were used as columns, were derived from the matrons of Caryas, a Peloponnesian city, who were carried into slavery because their country had sided with the Persians against the Greeks. Philosophy is needful to him only in the same way that it is needful to everybody—to prevent him being arrogant, and make him just, honest, and temperate. As for music, he seems to require it principally for testing, by the note they give, the strain of the ropes of catapults and military engines. His knowledge of medicine should be sufficient to guide him to avoid unwholesome sites and bad water. As for his knowledge of law, Vitruvius seems to think he ought always to be an expert in questions of party-walls, rights of drainage, and light and air. After this long enumeration of matters requisite for an architect, Vitruvius draws the line. Pythius, the architect of the Temple of Minerva at Priene, had said that an architect should be able to excel in all the arts, and in each to surpass those who made that art their especial study. Vitruvius thinks Pythius goes a great deal too far. An architect, he says, neither need be, nor can be, such a grammarian as Aristarchus, but he must not be unlettered; he need not be a musician like Aristoxenus, but he must not be without musical sense; nor need he be a painter like Apelles, but he must not be unskilled in drawing; nor need he a sculptor like Myron or Polycletus, but he must not be ignorant of the plastic art; nor, finally, has he to be a doctor like Hippocrates, but he must not be without knowledge of the laws of health; nor in other studies need he excel as a specialist, but he must not be wholly unskilled in any of them. To say that architects should excel in all these things is to demand an impossibility because it is only now and then that a man can excel in one art even if he pursues no other. Pythius therefore is clearly wrong, and has gone astray because he has not made a proper distinction between practice and theory. Therefore, says Vitruvius, *he* seems to have done quite enough in these several branches of study, who has a fair knowledge of those parts and theories of them which are necessary to architecture, so that if he should be called upon to pass judgment upon or to approve these matters and arts he should not be found wanting.

Vitruvius, therefore, waters down, as he goes on, the somewhat strong dose which at first he seems determined to administer to the student of architecture, as a tonic necessary to his constitutional well being. A general theoretical knowledge of the various crafts, which it will be his business to direct, sufficient familiarity with them all to prevent his passing indifferent work on the part of those who work under him, seems to be the measure of the practical acquirements necessary to an architect, according to the Roman authority.

On the other hand, we have the dictum of the Greek architect, Pythius, who says that the architect must not only have this general theoretical knowledge, but must be actually skilled in the practice of all the arts which he has to deal with; and not only that, but superior in each one of them to the specialist who follows only that single art.

Which of the two is to be our guide? Shall we be satisfied to be proficient in the theory of our art, learning it from books and lectures, and merely acquainting ourselves with practical work in a general way, enough to enable us to understand our specifications, and order the work properly, and detect flagrant instances of inferior workmanship and bad material; or are we with Pythius, to put our hands to the work ourselves, and not only design but help to execute it; to train ourselves to be master craftsmen as well as superintendents and directors of other men's labour?

For many generations past the former of the two methods has been the order of the day. Most of us who have reached or passed middle age have been brought up under it, and if we have, to any extent, departed from it, it has been of our own initiation that we have done so.

That this plan was not that in vogue during the best periods of modern European art is well known. It was not in that way that the architects, or building-artists of the Renaissance, in its earlier and more independent days, or those of the middle ages worked. They would have been at a loss how to go on if you had parted them from their building and their workmen, and shut them up with a drawing-board and a T square, and asked them to make their designs and convey their instructions by means solely of drawings. Their method was that of Pythius rather than that of Vitruvius, whose gospel, fortunately had not in their day obtained currency, or been placed on the canon of inspired authorship.

I need not tell you that of late years there has been a revulsion against what I will call the Roman method of practising architecture in favour of the Greek. Many of us have been preaching against the strictly professional view of architecture, and urging that a man cannot be expected to produce good designs who seldom or never comes into contact with the materials out of which his designs have to be constructed. We have argued that it is from the handling of material that suggestions in design can most readily be gathered. That reading about processes in building, or any of the arts which go to make up a building, will never teach a man how to make the most of his opportunity, how to use his material to the best advantage, how to economise labour so as to avoid wasting it to no purpose, and how to design in accordance with the natural qualities of stone, iron, or wood with which he has to deal. We have tried to impress on the student that an hour spent in the workshop or on the scaffolding will often teach him more than a week spent in a library. We have gone still further, and tried to persuade students not only to go and see how things are done, but actually to put their own hands to the work, and to become handicraftsmen in one or more of the many arts with which as architects it is incumbent on them to be familiar, and of which it is necessary the technicalities should be understood by any one who undertakes to design for them.

These proposals, however revolutionary they appear to the advocates of the old-established professional system, according to which architecture has so long been practised among us, are still, it is clear, very far from bringing us again to the methods of the architects of four hundred or five hundred years ago, to say nothing of those of the Greek architect whose demands seem to Vitruvius so extravagant. The contracts which Bishops and Chapters and others who intended building on an important scale made with their architects bound them down rigidly to a much more constant and intimate association with their work than a modern architect would submit to. The architect bound himself to come with his family and live in the place where he was to build, to engage workmen, and see that they did all that was necessary to be done, to work with his own hands, both in building and in sculpturing, as befitted a good sculptor, and a master of the art of stone-cutting. He was also to go to the quarries as often as was necessary, and arrange for the quarrying of the stone. Furthermore, he was bound for the term of so many years, during which the building was to be constructed, not to undertake any other work without the special leave of his employers, or a majority of them, or if he were engaged on some other building in the same or a neighbouring place, the time he should devote to each was strictly specified. Finally, he bound himself to supervise as chief master builder and superintendent all the labourers, builders, master workmen, and handicraftsmen employed on the building, and to supply them with such dimensions, orders, and methods as would be required during the progress of the works. For all this he was to receive a fixed annual salary, to which was sometimes added a gown or two gowns in the year, and perhaps a house was provided for him to live in with his family.

The architect of those days, therefore, was a superior clerk of works, as we should call him, with this radical difference, that he had no master over him, sitting most of his time in an office perhaps 100 miles away, directing him by the penny post what to do, and sending him drawings to show him how to do it. Imagine a modern clerk of works to have had the training of an architect as well as that of a tradesman in one of the handicrafts; that is to say, to have the skill to design the work he directs; or, what is the same thing, imagine a modern architect to have learned one or more of the manual trades, and to choose to go and superintend one of his own buildings as his own clerk of works, and you have the nearest approach to the architect who designed and raised the mighty structures of the past, which it is our aim to rival, and our despair to surpass. He would necessarily be a mason to begin with, for masonry is the king of all the trades, the one which all the rest follow, and the one which, blending itself, as it does, imperceptibly with sculpture—which is but a refinement of masonry—passes without any visible or marked transition into the higher region of fine art. In olden time sculptors and architects were the same persons, or, at least, though there were sculptors who were not architects, there were probably no architects who were not sculptors capable of designing the carved work of their buildings, and of executing the most important parts of it—notably the figure-work—with their own hands.

Let us for a few minutes try to realise in our own persons what it would be like to practise architecture after this fashion. Let us shut our eyes to the present and try to open them again in the days of, say, Henry VI. or Lorenzo dei Medici. The dingy office in a London street vanishes from our sight. Away go the high stools, the drawing-boards, the dusty piles and rolls of paper, for—oh! blessed release—there will be no more working drawings to make, and little drawing of any kind whatever. The office bell will no longer send a shock through our nerves, announcing the coming of a visitor to interrupt us at the most critical period of a design. The approach of post-time will no longer drive us into a frenzy to get off arrears of correspondence that cannot be postponed any longer, for we shall have little reason to write to any one. Our employers will be on the spot with ourselves, and an occasional conference on the building itself will make much letter-writing unnecessary. Away, too, goes all that tedious necessity of long railway journeys which dissipate our time, and exhaust perhaps four hours in travelling for every hour we have to spend on the work at the end of it. Our work will now be all under our eyes, or near at hand, and the hours wasted in the railway carriage will be employed to good purpose on our growing building. Away, too, go the long specifications, the contracts with builders, the lynx-like supervision required to keep their performance up to their engagements, for we shall either be our own contractors, or else have workmen under us employed and paid directly by our own employer.

Relieved of all these official and commercial occupations in which I venture to say most of us—do what we will—find half, and more than half, our time spent, we shall pass our working days clad in the workman's blouse, setting out our work on the ground, drawing such simple diagrams as will give the workman the proportions and dimensions of the several parts, marking out the mason's moulds, perhaps taking the mallet and chisel out of his hand to show him practically how we want certain parts finished, trying on the building itself as we can nowhere else the scale and proper character of our sculptured ornament, without doubt doing so much of it ourselves as will give the clue to the subordinate carvers, and probably finishing some of the most important parts with our own hands. Conceive the sureness and confidence with which we should work. There would be none of that experimental and hesitating anxiety which makes us doubt after drawing out a design whether it will come out as we intend in actual execution. No! there is the building itself on which to try experiments. When the thing is going wrong we can stop it at once and correct our original device and substitute something better, and there will be no contractor to worry us for an "*extra*" on the inevitable plea that the new way is more expensive than that for which he contracted. And so our building will rise, and as it nears completion, and the scaffolding comes down, and

we stand with hands behind us, and head thrown back, to see our creation as it emerges in its maiden whiteness from the enveloping veil of poles and planks, we shall feel that it is indeed our creation, the work of our own brain, and in a measure of our own hands, in a way that no architect can quite feel now about any of his creations, however much pains he may have devoted to them.

This, gentlemen, I venture to think, will appear in eyes of many of you—certainly to the younger men among you in whose bosoms the stirrings of art have all their youthful freshness—an attractive picture. Can we realise it at the present day? Or, if that is impossible, how near can we get to it?

Can we get back to it? Well, of course, we cannot do it in a hurry. But can we expect ever to get back to the old system at all? I think not. It would be putting the hands of time back too far. Changes of system do not come about without some reason in the natures of things and of men, and to neglect the conditions of modern life in art while we admit their supreme influence in other fields would be not only unpractical but unphilosophical. Take, for instance, the matter of working drawings. The drawings used in olden time were of the slightest and most conventional kind. Even in Wren's time working drawings such as we make for every detail were not found necessary when competent workmen were employed. When sending his small scale plans and directions for the library at Trinity College, Cambridge, Wren adds, "I suppose you have good masons; however, I would willingly take a further pains to give all the mouldings in great; we are scrupulous in small matters, and you must pardon us, the architects are as great pedants as critics and heralds." In his day there were trained schools of masons and joiners who had traditions of their own, and could be trusted to apply them. The architect gave them the size of the door, the scale and amount of ornament he wished to use in the doorcase, and the workman had sufficient skill to fill up the details of the sketch and to realise the architect's intentions as he would have them. So with the masons: to give them the moulding "in great" would, Wren seems to imply, be unnecessary if the men were good craftsmen. But where are the workmen nowadays who could be trusted to do this? It is easy to imagine the result if we tried the experiment. There are very many architects who do try the experiment of dispensing with working drawings, not from any desire to return to the older system of work as being better, but simply from the wish to save themselves trouble, or else in order to save their time for more lucrative occupations which have little or nothing to do with architecture. Some of them employ a ghost, and the ghost naturally takes little interest in a work which is neither his entirely, nor anybody's entirely, and the details come off badly. Others dispense with the ghost, and leave all the details to a contractor. One builder told me that when he applied to an architect for details of a certain work, the only answer he got was, "Take it and do it, and don't bother me about it." In another case the builder told me the only full-size details furnished him by the architect of a building which cost 6,000*l.* were those of a cellar door and a coal-shoot, and that he—the builder—himself made all the other working drawings, and did not even go through the form of showing them to the architect. Now, I need not tell you that, whatever may have been the case in the days of Sir Christopher Wren, there is no school of workmen nowadays capable of filling in the details on a general design given them by an architect. Nor need I tell you that it is on the details of a design that its success depends for its ultimate appreciation, no less than on the general conception; for no grandeur of idea, or originality of scheme, will make a good building if it is badly carried out in its details. An amateur may and often does have good conceptions in the mass, but it is only the artist who can carry them out into execution successfully, because he alone is capable of contriving the parts out of which the whole general idea is built up. It may be imagined, therefore, what kind of architecture results from the method I have described when the nominal architect gives only the rough idea of the building, and leaves the details to men who have had no artistic training whatever. Indeed, there is no need for imagination in the case, for the streets of London are lined with buildings erected on this system, expensive and costly buildings very commonly, for the worst modern architecture is the most gorgeously decorated, and lavish expenditure on ornament is the last resource of an incompetent designer.

But if neither builder nor workman can be trusted to supply proper details for the carrying out of an architectural design what conclusion is left to us but that they must be done by the architect? How is he to supply them? Of course, he might, like the old men, go and live on the work, and give the details to the workmen by word of mouth, or by example, or by setting out the moulds and dimensions with his own hands. I do not know how many of you are prepared to follow your craft in this way. You would only be able to look after one, or, at the most, two or three, buildings at a time, and though you would save the expense of an office, I fear 5 per cent. would not enable you to earn much more than a bare livelihood. Drawings, I fear, are, and must remain, a necessity if an architect is to have his designs carried out as he intends, and if he wishes to have full justice done to them.

Again, there are many buildings in modern times involving intricacies of plan which must be carefully plotted on paper and could be contrived in no other way. Old buildings were very simple, and in their plans there was very little variety. One manor house was arranged very like another manor house, and one cathedral or church on much the same general lines as another. Those buildings of our own day which retain this simplicity of plan could be built without drawings just as the old ones were. It would be easy enough to build a great church from foundations to cap-stone of spire without a single drawing but such rough diagrams as the designer would need to enable him to put the parts of his building together. But when we come to such elaborate buildings as the modern town halls, or technical schools, or boarding houses of our public schools, or theatres, or when we have to deal with confined and scantily lit sites, as in the streets of London, careful and elaborate plans are a necessity, and the drawing office indispensable. There is no prospect whatever of our being able to build in the future without drawings, and we may dismiss as impracticable all hope of superseding them by supervision and direction on the spot, and of being able to shut up our offices and take to the building sheds and the scaffolding.

But admitting all this—acknowledging, as I fear we must, that the necessities of modern system are too strong for us, and that we must, in the main, go on as we are now doing, is there nothing we can do to place ourselves more in touch with the handicrafts? If we cannot go the whole way, may we not go part of the way to meet those workmen on a common footing with whom, whether indirectly or directly, we cannot help co-operating in the carrying out of our designs? If we cannot, as Pythius would have us, excel in all the arts, so as to surpass in each one of them the skilled workman who has followed that one alone, and made himself master of it, surely we may, without being unreasonable, demand of our architects that they shall at least not design things without knowing how they are to be made. Nor if it is unreasonable to ask us to be better masons, better joiners and carpenters, better smiths and better plasterers than the men who follow those callings and do nothing else, is it unreasonable to demand that every architect should so far familiarise himself, by actual observation and inquiry, with every one of these trades, that he may know how to make designs suitable to the material employed and the way of employing it. And yet we are all our lives designing things without knowing how they are made. How is it possible we should not, in our ignorance, give a world of unnecessary trouble to the workman, cause a deal of needless expense to our employer, and miss altogether that propriety in design which arises from proper use of material, because the proper use of it is unknown to us? Take, for instance, the case of wrought-iron work. Every architect is called upon constantly to design such simple things as railings, grills, balustrades, in that material. He draws, probably, something after good examples that he has seen; perhaps he tries to improve on them and design something new, and if he knows nothing of smiths' work except from books and drawings and such sketches as he has made of his own, the alterations he makes very likely make what was very easy into something very difficult, if not impossible; and even if the workman gets over the difficulty by some troublesome device of his own, the labour involved is thrown away, and might have been saved by a little knowledge on the part of the designer. Those who have only designed ironwork on paper, and never seen it made, would be astounded to find how very differently it was done from what might have been imagined, and how very much more simply their design might have been done by altering it a little. I wonder how many in this room have any idea how so simple a thing as the ordinary forked baluster is made, with one foot to be let into the stone for each pair of balusters. I confess I did not know till the other day, when I wished to vary the form of the thing so as to give it a little more character, but began to doubt as I went on whether the smith could make it. So I went to the forge and had some experiments made, and found that the usual process was quite unlike what I had imagined. Another advantage of the visit was, that I was able to suggest to the smith other ways of doing it, and before we finished we had made a forked baluster in four different ways, and found out what was the easiest and cheapest. This seemed to me an instance of the way in which designer and workman can help one another; the designer, from habit, seeing his way to fresh possibilities, while the workman, from habit, had not thought of doing anything but what he was used to.

Let it be a rule, therefore, with every architect never to design anything without knowing whether his design is practicable, and practicable according to the received traditions of the craft concerned.

But may we go no further than this? May we not require that he should be able to put his own hand to the work as a handicraftsman in one or more of the trades over which he has to exercise control in the ordinary discharge of his duties?

There are some trades of which it is obvious such knowledge as an architect can derive from observation is enough. Going through the trades in the specification according to their order, we begin with *Excavator*. It is, I think, obvious that a man would not improve himself in architecture by going to work in the trenches with pick, shovel, and wheelbarrow.

Next comes *Bricklayer and Waller*. I once built a brick wall, but I do not know that I learned much from it, except that bricklaying was not so easy as it looked, and that if it was hard to keep a true upright it was still harder to keep a true level. The bricklayer to whom I showed my wall when it was done could only say that he thought it strong but very ugly. I do not know that I should advise any of you to follow my example.

Carpentry and Joinery are more within the reach of every one, and a course of training at the bench may safely be recommended to all who have to do with building as supremely useful.

I need not go through all the trades, but *Masonry* brings us near to the very centre of architecture. To be a practical mason would not in my opinion be so useful an accomplishment for an architect as skill in joiner's work. The ordinary problems of stone-cutting can, I think, be understood without actually handling the chisel and mallet. But masonry, as I have said, melts insensibly into sculpture, and it is not always easy to say where masonry ends and sculpture begins. What will you do when you come to the carving of your building, as, of course, come you must in a building of any importance? If you only care for quantity and not for quality you can, of course, leave it, as many do, to the carver, and simply get an estimate and leave him to do his best, which in that case may be also his worst. But you will not, I am sure, if you are in earnest, be content with so perfunctory and vicarious a way of bestowing on your work its principal adornment. You will have your own notions of the scale, the character, and the finish of your carved work; you will feel that the outline of your sculptured capitals is as important as the profile of your mouldings, that the play of light and shade in your foliaged stringcourse or your enriched frieze was an important element in your design; you will desire for your sculpture an historical character, illustrating the purpose and circumstances of your building; and above all you will feel that the same feeling which you have impressed on the purely architectural part of your design must be carried into the sculptured decoration, or the unity of the effect will be marred. You must impress yourself on that as you have done on the rest.

How are you to do this? You may spend hours standing over the sculptor or watching him model what is afterwards to be carved, and tire both him and yourself by suggestions and counter-suggestions which perhaps end in mere mediocrity and dulness, because though both of you want something different you do not want the same thing and are unable to explain your meaning to one another. But if you were able to finger the clay yourself you could realise to yourself your own intention, and explain it to him perfectly, and in this way you would succeed in getting what you want as you can in no other.

Every architectural student, therefore, ought to learn to model. He will find it of the greatest service to him in his future career, not only in enabling him to explain his meaning to those artists who will collaborate with him, but also in fixing and correcting his own loose ideas of sculptured decoration, and helping him to secure for it that character which will correspond to his intention. If he goes on to carve so much the better; for my part I should like to see the callings of sculptor and architect rolled into one.

As to the other crafts time forbids me to speak more at length. Every man, be he artist or not, should, like the ancient Jews, be taught some handicraft; and to us architects such an accomplishment would naturally be doubly useful. We cannot expect that an architect should have actual manual experience of them all, still less can we require, with the Greek writer, that he should have mastered them all. But we have a right to demand that he shall by actual observation acquaint himself with the methods and difficulties of them all, not from books but from the workmen, not in the library but in the workshop. Let him never make a design without knowing how it will be carried out, and if in doubt let him go with it to the workshop, the building shed, or the forge; let him consult the men who are to make it, and then correct or alter his design to suit the difficulties of material and workmanship. In this way we may expect to infuse a new life into our architecture and to awake it from its torpor. The knowledge you will acquire in this way will not be of a kind to be tested by examination, or to enable you to win prizes and scholarships, but you may feel assured it will be the means of making you better artists individually, and of advancing the art of your country as a whole.

Mr. Owen Fleming, in proposing a vote of thanks to Mr. Jackson, said that he had listened with very great pleasure to a most thoughtful investigation of the problems that faced modern architects who were anxious to put into their work the same spirit that we found and admired in ancient work and that we missed and deplored, speaking of it as a whole, in modern work. We realised the very great difficulties that lay in the way of any return to the almost idyllic picture of mediæval times which Mr. Jackson had sketched out. He (the speaker) knew of one old student of the Association, Mr. Detmar Blow, who had given up some excellent opportunities of becoming a good paper architect, and had articled himself to a firm of masons and had worked on actual building. He believed that Mr. Blow was of opinion that his future work would certainly be better for the experience thus gained. There were a few other architects, though they could be counted on the fingers of one hand, who had been self-sacrificing enough to take a similar course. Having regard to modern conditions—to the intricacies of planning referred to by Mr. Jackson, and to a matter to which Mr. Jackson had not referred, but which had always been a great difficulty with him (the speaker), viz., the problem of getting an estimate before one began to build (which seemed to him to be impossible under any system of building without careful drawings)—with these difficulties before one he did not think we could hope to return to the ways of the past. But he thought there were things we could and should do, and it would be interesting to consider what the Association had done and could do. They would remember the old voluntary system that wanted organising and bringing into form. That was done after some years of hard work, with the aid of a man whom the Association would never forget, viz., Mr. Leonard Stokes. But having taken the course they did, they found that they had gone a little too far, and that they had not sufficiently provided for the practical side of an architect's work, and in consequence they found, much to their regret, that some well-known architects whom they wished to carry with them were rather opposed to them. Mr. Stokes and his colleagues therefore sought some method of bringing the views of those gentlemen into harmony with the system that had been drawn up, and then followed the memorable conference at which they arrived at a *modus vivendi* which would have enabled them to carry forward a general system acceptable to all architects. Their action, however, was misunderstood, and some very unpleasant years elapsed, during which some of those who had done yeomen's service for the Association were given their *congé*, while the new scheme seemed to be falling somewhat into the hard-and-fast lines of the Ecoles des Beaux-Arts. This course, however, did not give satisfaction, and an endeavour was made to induce those governing the Association to see that a purely academic form of education was likely to injure rather than improve architecture and building, and he thought that much had since been done in the direction of that view. Among the Visitors to their Studio their older friends were now reinforced by men like Mr. Jackson, Mr. Prior, Mr. Lethaby, Mr. Ricardo, Mr. Voysey, and others—in fact, nearly all those who were earnestly desirous of carrying forward a practical scheme of education. Last year at the School of Design and Handicraft they began a new system, and, instead of trying in a scrappy way to sketch out building after building month after month, they resolved to take one building and work it out thoroughly, dealing with each material separately. The system was fairly successful, and this year it had been developed, and when the work of that school came to be exhibited, as it would be within the next two or three months, his hearers would feel encouraged at the result, and would begin to think that the right course was being pursued. This year they had deliberately put on one side the reproduction of past forms. What was aimed at was to study the material—to get at the real thing and the possibilities of the material with which they had to deal. When this was satisfactorily done, then their drawings would be simply diagrams illustrating as far as was necessary how certain materials ought to be treated. They had been working, owing to the kindness of Mr. Lethaby, at the new School of Arts and Crafts, which was going to do a very great deal towards the improvement of artistic handicraft. They had been working in stone and lead, and some of the recent results were thoroughly satisfactory. He thought that the Association had arrived at a critical period of its existence, and he feared that there would be a struggle between those who believed in the academic method of treating architecture and those who believed in the practical. He did not object to examination as examination. He had spent years in preparing for the Institute Examination himself, but though he did not know it then, he now thought that those years had not been used to the best advantage. But, for all that, he did not wish to evade the Examination; as they had to pass it, let them get through and be done with the matter, and then turn their attention to real architecture and building. Mr. Lethaby had recently told him that they had practically only to ask the Technical Board and good workshops would be placed at their disposal, and he (the speaker) hoped that some possible system would be adopted by means of which those workshops could be incorporated in the Association's new premises. It did seem to him to be essential that the workshops should be on the premises, so that when they entered their premises they would have oral demonstration that real handiwork was being carried on. Architectural students would then feel as engineering students do, viz., that they were part of a living, working profession. If the Association endeavoured to produce paper architects simply and solely, they would be taking a retrograde step which would do very great harm to English architecture. It was interesting to consider how the Association could move in the direction of the solution of what he supposed was the greatest question that architects had to consider.

Mr. H. W. Pratt, in seconding the vote of thanks, said he had been much interested in hearing Mr. Jackson state so clearly and so moderately what architects should undertake in the way of handicraft work. They had been more and more led to believe that an architect's education was not sufficient unless he had a very considerable knowledge of almost every handicraft with which he would have anything to do; and although Mr. Jackson would like architects to know as much as possible of those trades, yet he supposed that Mr. Jackson meant that every architect should be specially taught some handicraft, and he, no doubt, would agree that a proper knowledge of one handicraft would be better than a smattering of many. There was, no doubt, a tendency, and technical schools seemed to have exhibited it, in the direction of the acquisition of a smattering of handicraft work, which led to the students going about their work in an amateurish sort of way. He would be very sorry indeed if technical education on these lines should be taken up by architects. He thought that if an architect in his student days took up masonry, or carpentry, and confined himself to one or the other, he would fulfil all the conditions that might be reasonably expected of him. There was no doubt that there were many interesting allied trades of which an architect should have some, if not a considerable, knowledge; but unless architects were able to get two years' work into one, it would be impossible for them to attempt to thoroughly learn all these subsidiary trades. To follow successfully and satisfactorily one trade would do an architect a great deal of good, while to attempt more would probably be harmful. The Association, although it had not yet accomplished much, was moving in the right direction. Mr. Jackson had referred to the need of modelling in an architect's work, and he (the speaker) would commend to the students their modelling class, which was one of the best classes they had, and which was under the direction of Mr. Pomeroy. That work, he was glad to say, was being actually carried on in their own premises, but it would be a very large undertaking to set up carpentry shops, forges, and so on. The idea was pleasing, but the practicability of carrying it out was quite beyond their reach, though the sympathy of the committee was entirely in that direction; and whether they established workshops themselves, or whether they secured facilities for their students elsewhere, there was no doubt whatever that students ought to be more intimately connected with the handicrafts. He thought the Association might do more in this direction even at the present time, viz., by visiting workshops. No doubt it was a little difficult to arrange, but at the same time, next to actual working, it was an advantage to visit workshops while work was being carried on. The illustration which Mr. Jackson had given them in his own life was very interesting. Members of the Association might, if they had facilities given them of visiting workshops more often, derive a vast amount of knowledge in this way, and what would be difficult to obtain in any other way. He was glad to hear from Mr. Jackson how an architect should get his work carried out, especially when he replied to those who said there was no necessity for an architect to put his designs on paper. Mr. Jackson looked at the matter in a common-sense way. There was no doubt that at the present time no one was able to carry out work satisfactorily without the supervision of a master mind, and as a means to an end an architect's ideas had to be put on paper. There was no doubt that if they studied and followed some particular trade, and if they used their observation in acquiring knowledge of other trades, they would be doing much to realise the objects they had in view, one of which was to know how to work and treat materials in which they were designing. Architects in past days usually had to confine themselves to one work at a time, and he did not suppose that many architects of the present day would object to a more equal distribution. He remembered that the large building at Virginia Water for Holloway was carried out under rather unusual circumstances, like those which prevailed, in fact, in past times, for Mr. Crossland, the architect, and his whole staff resided on the spot until the building was completed. This was an opportunity, however, which did not often occur. Mr. Jackson's paper would set them thinking as to how far they could go in that direction. Mr. Jackson's ideal was a very high one, but he had brought it down to attainable limits, and he (the speaker) felt sure that they would do their best to forward the movement by combining with the crafts for the development of architecture as a whole.

Mr. C. H. Brodie, in supporting the vote of thanks, said that young architects should all try to go as clerks of works for some time upon buildings being erected. If young architects were to do this, and were to see the erection of a building from the excavation to the finish, the result would be very satisfactory ; no architect, in fact, was thoroughly competent unless he had had such opportunities. An architect clerk of works, especially one with artistic leanings, would make it his business to go into workshops to see the different parts of a structure made in different materials. In reference to engineers, they as a body knew much more about their work than architects, and that result was obtained because engineers were bound to spend a portion of their time as students on works in progress ; and until architects did that he thought they would be as blind men leading the blind. In addition, of course, the young architect might take up some handicraft ; but, at least, he should be upon one building during the whole time of its erection.

Mr. Banister F. Fletcher said that he thought Mr. Jackson had given them, in a rather more moderate way than many of them expected, certain of the views he had expressed in a recent book which he had published. The historical part of Mr. Jackson's address, in which he dealt with the old architects or masons, was interesting ; but the difficulty seemed to be to know exactly what those men were, and how they carried out their work. We had no really direct evidence, as far as he was aware, as to who really made the designs for the mediæval cathedrals. He was inclined to think that the "workmen element" was rather to be remarked by its absence in the designs in question. He was inclined to think that there was an intellectual element which we were not able to get at, because few drawings prepared in those times had reached us. It seemed to him that there must have been some more responsible authority, and some person of greater knowledge, than could be expected from a mason, for instance. Of course, these remarks related to the historical part of the paper, and so far as the architects of to-day were concerned those remarks were of little use, because architects lived under different conditions, and they could not possibly practise the ways of the past. The other part of Mr. Jackson's paper, insisting on the knowledge of materials, they must all agree with, because it was evident that architects could not satisfactorily design in any material unless they knew what the qualities of the material were. The question about which there would be differences of opinion was as to how that knowledge should be obtained. He was inclined to think that no evidence had been shown that it was necessary for an architect to work at any trade. Of course, if an architect had anything to design he could go to a workshop and witness the process of carrying out designs in the material which he desired to use, and if the architect had not sufficient intellectual capacity to observe the particular qualities which the material possessed, he, the speaker, did not think that such knowledge could be gained at the bench. A parallel could be instituted with music. As far as he knew the great composers were not great executants. The great composer looked at the question from the composer's point of view rather than from the performer's. We ought to know what was the practice of great architects of the past 200 years. That period contained the names of very eminent men, and was it known that they ever worked in workshops ? Did Wren ever work at the bench ? Was it known that Pugin, Barry, Scott, or Street ever hammered away at a piece of stone or ever did any carving ? Mr. Fleming was always interesting because he always looked at the matter from one point of view. He had referred to the reproductions of past forms, but he, the speaker, did not know how any one could design architecture without the reproduction of past form. It seemed to him very wrong to teach students to do so because there was nothing else for them to do. If Mr. Fleming, in prohibiting the use of past forms, would supply a code for new ones they would all be very thankful to him. It was like saying that no one should use words which were employed two hundred years ago. Architects did not take forms and use them as they were used in the past ; the forms were used in a different way, just as the English language was spoken in a different way from the time of Shakespeare, for instance. As to Mr. Fleming's reference to the academic *versus* the practical architect, he (the speaker) was always dubious about the practical man. Was Mr. Norman Shaw a practical or an academic architect ? He was rather inclined to think of Mr. Shaw as an academic architect, and yet, if they looked at Mr. Shaw's joinery, they would see that, although he never worked at the bench, his work had been put together in a masterly way. Could the Paris Opera House have been designed by any one but an academic architect ? Suppose that a Paris Opera House had been designed by a "practical" architect, should we feel satisfied with the result ? An architect was a man who had to use his head, and when he was able to do that, and could plan buildings properly, he might turn his attention, though it would be late in life, to bench work. Architects were expected to know everything, and the opinion of Vitruvius as to what an architect should know was a moderate one compared with that of modern educationists. Then there was the client's point of view ; an architect should take care to remember that. Having got a client, if they were not careful to remember his point of view, they would probably never get another. They could not get rid of the fact that in the nineteenth century an architect was very largely, although Mr. Jackson would not agree with that, a business man. A client expected an architect to be able to protect him, and if architects did not do that they would be neglecting one of the principal duties for which they were employed.

Mr. E. W. Allfrey said that one very difficult question was as to how far an architect should go in endeavouring to acquire a knowledge of the crafts. Given a complicated modern building, with carving and decorative work to be done, and other requirements, either the architect must design and do that work himself, or else he must leave it to his workmen. If the architect were to design the work himself, of course he must have a very large knowledge of those crafts to which the work belonged ; whereas, if he left the work to the workmen, bad work very often resulted. It seemed to him that an architect should have a general knowledge and should stand as a critic to his workmen, rather than be a craftsman himself. The architect must be a highly-educated man, and he must be able to see where his workmen were at fault ; and when they were, to be able to put them right. He did not think it was necessary for the architect to go very far into the actual craftsman's side of his work. Another point was as to how far an architect should carry his training, and at what age he should begin his work as an architect ; and how far was it good for an architect to have a general or a University training ? He had had the advantage of a University training, and he sometimes thought that he would have done better to have commenced his work as an architect at an earlier age. A University training put off the day when an architect could commence his professional career.

The Chairman, in putting the vote of thanks, said it had been a great advantage to them to have had Mr. Jackson's views expressed in his admirable paper. It was particularly interesting, because Mr. Jackson took a very leading part in advocating a particular line of training, and his views might differ somewhat from others who had equally at heart the progress of our national architecture. From whatever point of view this educational question was discussed, they could all claim that the one object they had in view was the progress of the art of architecture. He was sure that Mr. Jackson's paper would contribute to that end, because it was so moderate and practical in its suggestions. The contrast which Mr. Jackson drew between the Greek and Roman schools was very interesting, and he (the speaker) gathered from the paper that Mr. Jackson differed from both, and would take a medium course (which course might best be illustrated by the *quattro cento* Italian work). He really advocated that we should be more sculptors than we are, and perhaps rather follow the general training which the sculptor-architects of Italy enjoyed. He did not know that we should be satisfied with that training, but there was no doubt as to its effect upon detail in the times he was referring to. Whatever might be our feelings as to their general proportions and outlines, no doubt could exist as to the exquisite beauty of the detail which that period produced. Any training which leads us in the direction of producing anything like the same result was to be striven for. Mr. Jackson's illustration of how fresh suggestions and results might be obtained by witnessing the methods of work was a particularly good one. He (the speaker) had found it of advantage to him to do the same. He did not know what Mr. Fleming meant by his reference to the coming struggle in the Association. He saw no sign of any struggle against the methods on which Mr. Fleming had suggested the training should proceed, for as far as he could see the training of the young architect had become more and more practical and had gone more in the direction desired by Mr. Jackson, to whom they owed a great deal for so heartily throwing himself into their work and becoming one of their Visitors. He did not know that we could point to anything much better as a result of the training which Mr. Jackson advocated than some of that gentleman's own work. Mr. Jackson considered that they ought to devote more time to practical training in the way of learning a trade, but it was thought better by the Association to take a medium course. It was quite impracticable, he thought they would admit, to give, say, a year—and nothing less than a year was of much good—in a joiner's shop, for instance. They could not afford the time. He was strongly in favour of taking modelling, and no doubt if a man were a good modeller a great deal would follow. The system of training which they aimed at in the Association was a combination of design and handicraft. Of course, every young architect who had a chance would do well in his first work to reside on the spot so as to be present to conduct the work in person. If he could not do that he should endeavour to get work as a clerk of works. In reference to Mr. Allfrey's remarks about a University career he (the Chairman) could not help thinking that the few extra years which a man usually spent at a University were invaluable in broadening the mind.

The vote of thanks was then put to the meeting and carried unanimously.

Mr. Jackson, in reply, said he had always looked upon the Association as one of the most hopeful institutions for the advancement of architecture that we had. The Association had always taken a practical view of things, and they were now, with their Studio, and with the relations they had established with the School of Arts and Crafts, carrying out what he thought was the training of an architect in the very best possible way. As to the difficulty of getting access to workshops, he had an opportunity recently of visiting the Art School at Birmingham. There the principle had been adopted of establishing schools of such a kind that every designer could go and see his work carried out himself. That seemed to him to be an admirable arrangement, and he wished that other art schools in the country would do the same. These additions to the curriculum of an ordinary art school were invaluable, and he hoped that something of the kind would be arranged for the Association. Mr. Fleming had apparently advised his hearers to get through the Institute examination as quickly as possible, so that they might return to more profitable pursuits. Mr. Fleming should have given them his reasons for passing the examination at all. As the examination was a matter only to be got through and done with, surely it would be better to leave it alone altogether, and for students to turn their attention at once to workshops and practical work. As to Mr. Pratt's fear that the classes of technical schools would lead to no more than a smattering of knowledge of several trades, he felt that it would be of advantage thoroughly to master one craft, at all events, so as to understand some of the difficulties entailed in working on any given material ; but he saw no objection to a student knowing something of many other trades. They could hardly fail to master one trade without getting suggestions as to difficulties in others, and the knowledge which they thus acquired would prevent them making mistakes. He always recommended his pupils to finish their training by working on a building, either as a clerk of works or by putting themselves under clerks of works, and those pupils who had done that had never failed to derive great benefit from that course. They saw all the crafts at work, and they gained knowledge in that way which they could never acquire when working in an office. Mr. Fletcher doubted whether the "workman element" was so strong in the ancient buildings as had been suggested. The matter was not altogether clear, for we did not know the whole circumstances under which buildings were carried

out, but we had certain names, and we knew that many of the workmen were superior men. There were workmen and workmen, and it was the skilled workman who came to the front and qualified himself, and it was to him, he thought, that we must attribute the designs which we all admired. It was difficult to know what part the great men, whose names we possessed, played on the building. As to Mr. Fletcher's illustration about the great composers, he might remind that gentleman of Mozart, Mendelssohn, Bach, Handel, who were the greatest performers of their day, so that this illustration rather supported his (the speaker's) side of the question.

Mr. Fletcher said that his point was that the architect of to-day was in the position of a conductor who controlled all the musicians.

Mr. Jackson : But he also controls the music. He might quote Viollet-le-Duc, who was a practical craftsman. As to Mr. Allfrey's remarks, so far from agreeing with him that a University training was a drawback, he always found that pupils who came to him from a University learned much more quickly than others.

The Chairman announced that the next meeting would be held on the 30th inst., when Mr. Hugh Stannus would read a paper entitled "The Classic Cornice."

The meeting then terminated.

The Members' Soirée.—The members' *soirée* will take place at the St. George's Hall, Langham-place, W., on Thursday, May 6, at 8 p.m., when a musical play, entitled "The Bounds of Art," written by Mr. H. B. Creswell, with music composed by Mr. Leonard Butler, will be presented.

MAGAZINES AND REVIEWS.*

THE *Art Journal* contains an interesting, we might say a learned article by Mr. Claude Phillips, on the important collection of pictures at Longford Castle, chiefly Dutch ; at least all those dealt with in this section of the article are by Dutch painters. An article by Mr. L. B. Starr on the Mouchrabieh cabinet work of Cairo, gives a description of the structure of this class of work, with some illustrations. A very interesting and rather novel article is that by Mr. W. E. Osborn, on "The Possibilities of the Poplar ;" the artistic possibilities of course, which the author illustrates in some very effective sketches.

The *Easter Art Annual*, in connexion with the *Art Journal*, is devoted to the life and work of Sir E. J. Poynter. We are glad to welcome a collective account and illustration of the work of the new President of the Royal Academy, one of the finest figure designers of our time ; and perhaps some of these works strike one even more from their excellence in drawing and design when shown in black and white. The beautiful little picture, "High Noon," is shown in a most effective reproduction. One of the principal illustrations is from "The Ides of March," a very poetical work which hardly received the attention it deserved on its first appearance. It is a pity the "Ionian Dance" was not reproduced photographically, the line engraving does not do justice to the exquisite grace of the dancing figure. In the literary portion of the issue we observe a reference to Sir E. Poynter's opinion as to the English system of keeping the student so long at casts before he is allowed to draw from the life, which he condemns on the ground that the student cannot properly understand the merits or meaning of the cast without the knowledge of the living figure. Sir E. Poynter therefore always preferred the French system, under which the student had to make only a few studies from casts to get his hand in, and was then set without more delay to the serious study of the life.

In the *Engineering Magazine* Mr. Geo. H. Paine chooses a very good subject in "The Value of Quiet and Beautiful Streets." He considers streets in connexion with the City architecture, and tags his illustrations with some pithy and suggestive comments ; under a view of Broadway for instance—"Streets are used by all and should interest all. Pavements are not for vehicles only. Many other interests are involved ;" from which the reader will gather that Broadway is not one of the streets selected as happy examples. Under the view of a street in Cairo, without pavement—"Such streets are used for necessity, not for pleasure." Under a view of the Piazetta, Venice—"The pavements of many Italian cities are laid as part of the city architecture, for beauty and utility." There are many good ideas in this article. The subject of "Materials and Methods for Fireproof Construction" is treated by Mr. Scanlan. It naturally bears more on American practice than English.

Scribner contains a highly appreciative article by Mr. Cosmo Monkhouse on the works and the genius of Mr. Orchardson. We are glad to see an article doing full justice to this remarkable and original painter, whose real powers are by no means fully appreciated by his countrymen in general. The third article on "London as seen by C. D. Gibson" is concerned with the Parks, but entirely with their occupants, not with the Parks themselves. Mr. Gibson's sketches are however very clever. An illustration by Mr. William Hole of the transformation scene in "Dr. Jekyll," which forms the frontispiece to the number, is clever, but it is a nearly impossible scene to treat pictorially. From a paragraph in "The Field of Art" we learn that the demand for pictorial decoration to buildings is rapidly on the increase in America, and we are glad to see that the writer of the article protests against the absurd jumbling of schools and styles in the Paris Hôtel de Ville paintings, and insists on the necessity of unity in a scheme of decoration for a great building.

The *Century* contains an article on "A new American Sculptor," Mr. G. Grey Barnard. This class of articles in the American magazines is too much permeated by the predetermination to write up modern American Art, and to produce a whole string of new geniuses ; but some of the works illustrated, more especially "Brothers," do seem to imply that Mr. Barnard has some original genius and a method of his own. By far the most interesting series of articles in the *Century* at present are the military ones entitled "Campaigning with Grant," which do not come within our *métier*, but this week they are prefaced by an engraving of the great mausoleum which the country is raising in hononr of Grant, a very grand affair indeed, but entirely deficient in originality, unless it is considered original to hoist a circular Ionic colonnaded building on to the roof of a Greek Doric Temple.

In the *Cornhill Magazine* is an article on "The Cost of Country Houses" ; not a very satisfactory one to architects, as the tendency of it is to show that keeping a large country house costs a great deal more than people generally expect, and that therefore it is not wise, in one's own interest, to build a large house ; a melancholy conclusion. It is admitted, however, that the man who builds and keeps up a large country house and park generally confers an immense benefit on the neighbourhood around him ; so there is an encouragement at least to philanthropists to spend money on themselves, on the *sic vos non vobis* principle.

The *Atlantic Monthly* contains a most interesting communication by Professor Lowell on "Mercury in the Light of Recent Discoveries," some of which are very recent. The main result is that Mercury is in the same position in reference to the Sun that the Moon is in reference to the Earth ; it has no revolution on its axis, and turns the same face always to the Sun ; that, like the Moon, it is "dead," and this deadness Professor Lowell connects with the stoppage of revolution on the axis, the result of the "brake" effect of tidal friction, which has stopped the Moon and Mercury in their revolution, and is in slow progress of stopping that of the Earth. And after that, what ?

In *Macmillan* the "Leaves from the Journals of Landscape Painter" does not in itself deal very much with art, but it will interest many readers when they find that the "landscape painter" was no other than Edward Lear, better known to the world at large as the maker of nonsense verses for the delight of children. In a short notice prefixed to the article it is mentioned that Murchison observed of Lear's sketches that they always told him the geology of a country, though Lear knew nothing of geology ; a high compliment at all events to the artist's fidelity of observation.

In *London Society* the lady known in literature under the name of "John Strange Winter" is writing a series of articles on "The Ideal House," chiefly concerned with questions of taste in regard to furniture and decoration, and written very much from a woman's point of view. The following account of an assemblage of colours at a concert in a private house is amusing :—

"The double drawing-rooms were papered with flame-yellow, the curtains to the many windows were bright scarlet. The divisions between the two rooms were draped with velvet curtains, and were a red of a wholly different tone. The carpet was a deep soft crimson, the chairs, mostly gilded, were upholstered in broad crimson and white striped satin, or in rich red silk damask, which went with nothing near it. There were a few pictures, small oil-paintings, hung well below the eye-line, and the only ornaments were blue and gold Sèvres, such things as clocks and candelabra, under glass shades. All the sofa cushions were of a brilliant turquoise blue !

The two footmen who hovered in and out wore bright pink stockings and magenta plush breeches. The hostess—a very florid woman—wore a gown of deep crimson satin (wholly different in tone to all the other reds in the room) quite unrelieved by any softening lace or trimming. One daughter wore a lavender dress, the other two had pretty summer frocks of bright apple green."

The *Pall Mall Magazine* contains an illustrated article on Levens Hall (of which the celebrated garden is better known in illustrations than the interior of the house), and another on the town and the lace of Honiton.

In the *Gentleman's Magazine* Mr. Jas. Cassidy, under the heading "Ceramic Art at Derby," gives a description of a visit to some of the great pottery factories at Derby.

In *Knowledge* a serial article on "English Medals" is commenced by Mr. G. F. Hill, with illustrations from a good many early medals. An essay on the "Age of Mountains," with diagram sections, by Professor Lobley, comes to its second chapter in this number.

The Land Magazine is a new publication, dealing with matters affecting landed interests. There ought to be room for such a magazine, and the articles appear to be thoughtful and well written. Among the subjects treated are "Forestry in Switzerland," "The New Agricultural Holdings Act," and "The Cadastral Survey of France."

The *Quarry* devotes an article to the subject of "Serpentine 'Alabaster' and Porphyry."

NEW GOVERNMENT LABORATORY.

FOR many years past the analysis of samples of various kinds of drugs, tobacco, beer, worts, tinctures, &c., has been conducted in the upper part of the Inland Revenue portion of Somerset House, but the space occupied by the laboratory being required to meet the growth of the Inland Revenue Department, it was decided to erect a separate building on a piece of vacant land in close proximity to the new Bankruptcy Offices and King's College Hospital.

The new Laboratory, which is now almost completed, is approached from the Strand through Clement's Inn. The ground-floor contains a waiting-room, rooms for the Principal and Deputy Principal, reference library, and the following laboratories :—Crown Contracts, Reference Sample, and Research. Near the entrance is the main staircase leading to the first floor, which contains rooms for Superintending Analyst, for the examination of tobacco, polariscope room, and a laboratory, 49 ft. by 43 ft., for beer, worts, spirits, and tinctures. A museum and rooms for photographic and other purposes occupy the second floor. In the basement are storerooms for scientific apparatus, chemicals, &c., hydrometer, and standardisation of instruments room. Water analysis and bacteriological laboratory, space for steam boiler, pumps, &c., coal vaults, and refrigerating room.

The vitiated air in the various rooms and laboratories is drawn by down-cast pipe-flues to a main vitiated air-channel formed under the basement floor, and thence is extracted through the exhaust shaft with the aid of a powerful up-cast steam ventilating fan.

With a view to economy in the supply of water for experimental purposes to the large laboratory on first floor, a special collecting tank has been constructed in the basement, from which the water is pumped into high-level tanks for re-use. Special plant is also being laid down for the production, by means of compressed carbonic acid, of ice and super-cooled water for maintaining the proper temperature of the supply, and for the purposes of a cold store.

The building is warmed by radiators supplied by steam at low pressure, and arrange-

* The object of these notes is to point out anything in the contents of the current magazines which is of special interest to our readers, with occasional brief criticisms on the views expressed in such articles. When a magazine which has been sent to us is not noticed, it is because that number contains nothing that it is within our province to comment upon.

ments have been made for the supply of fresh air by means of flues constructed in the floors.

The floors and ceilings throughout are of fireproof construction, and provision is being made for electric lighting, pneumatic bells, and speaking tubes. Lavatory accommodation is provided on basement, ground, and first floors.

All the laboratories, staircases, corridors, water-closets, and areas are lined with white glazed bricks. The external elevations, which are plain and unpretentious, have red facing bricks from Bracknell, Bucks, and dressings of Portland stone.

The following are some of the firms employed:—Mr. B. E. Nightingale, builder; Messrs. M. Fawcett & Co., for the fireproof floors and ceilings; Mr. J. F. Ebner, for mosaic and wood block flooring; Messrs. Wilkinson & Co., granolithic paving; Mr. J. Jeffreys, warming apparatus; Messrs. Gimson & Co., for cast-iron tanks; the Hydraulic Engineering Company, for lift; Messrs. Mowlem & Co., for working benches, presses, &c.; Messrs. Clements, Jeakes & Co., for H_2S and other closets, and for various special fittings; Messrs. Hall & Co., for ice-making and cooling plant. The work is being carried out from the plans, &c., and under the directions of Mr. J. Taylor, C.B., of H.M. Office of Works, at a total estimated cost of 23,500*l.*

Illustrations.

THE CHURCH OF BROU-EN-BRESSE, BOURG.

THE name of this church, at all events in its shorter form "The Church of Brou," has become a familiar sound to English ears from Matthew Arnold's popular and in many respects very beautiful poem under that title. The poem has also had the result of giving to many persons an entirely false idea as to the building. Arnold seems to have laid hold of the story, which took his fancy for poetic treatment, without having seen the building or got any information about it. Consequently he conveys to his readers the idea of this being a humble though beautiful country church on an out of the way site, whereas it is a building of the scale of a second class cathedral, standing at the gates of a city, and of immense elaboration of detail. Nor do the sculptured figures of the "princely pair" repose side by side on the same monument, as the poetic imagination represents them.

The church, however, is a remarkable one in some ways, and some illustrations of it, as a building much better known by name than it is in fact, may be of interest.

The illustrations, which are from photographs, comprise a general view of the west front; the detail of the west door; the choir-screen or *jubé;* the tomb of Margaret of Austria, the foundress; another view of this, showing two other tombs through the vista of the arch; and the tomb of Margaret of Bourbon.

Some historical and critical remarks on the church will be found in a special article in the present issue.

THE "DÉPÔT CENTRALE DES POSTES ET TELEGRAPHES," PARIS.

THIS vast establishment, only a portion of which has yet been carried out, has been built after the plans and under the direction of M. Scellier de Gisors, on a site in the Boulevard Brune, near the Ceinture railway. According to the general scheme adopted in 1889 by the Post and Telegraph Department, the building was to include workshops for the manufacture of telegraph materials and of postage-stamps, also a department for testing, a chemical laboratory, a gallery for machines to be used as prime movers, and all the necessary buildings for offices, administration, and the lodging of the resident staff.

The entire buildings occupy an area of 7,827 square mètres. All the buildings are or will be erected on specially prepared foundations, in the forming of which 226 pits have been sunk and filled with concrete, to the depth of 7½ mètres. The foundations and subsoil structure generally is in *meulière*—we give the French designation, as there is considerable uncertainty, in this as in many other cases of technical terms, in regard to the precise English equivalent in meaning. The plinth is of Lérouville stone, and the bulk of the walling above that is in Bourgogne and Belleville bricks, with dressings in Villiers-Adam stone. The constructional portion of the floors is of iron, and the roofs of the workshops; the other roofs are of iron and timber combined; all covered with Choisy tiles. The interior woodwork is in oak and pine.

The whole building is warmed on the low-pressure hot-water system, each portion of the building having an independent system. There are fire hydrants at forty different stations, supplied by a Worthington pump.

The total cost of the building will be 2,184,136 francs, about 346 francs per square mètre of construction.

The buildings were commenced in June 1892, and completed in March 1895.

The illustration only shows a portion of the exterior, sufficient to indicate the plain and severely practical character of the architecture employed. That there is no scale to the plan and section is due to the unfortunate habit, which is almost universal among French architects, of putting no drawn-out scale on their drawings, but only stating in writing what the scale is. Consequently, when copies of the drawings reach one in the form of reduced photographs, the statement of scale is of course useless.

The complete geometrical elevations, plans, and sections, drawn with the greatest care and to a large scale, formed a prominent exhibit in the architectural room of the Salon last year, and gained the architect the award of the gold medal of the year for architecture.

ARCHITECTURAL SOCIETIES.

EDINBURGH ARCHITECTURAL ASSOCIATION.—The Edinburgh Architectural Association visited on the 27th ult., Hatton House, Midlothian, by permission of the proprietor, the Earl of Morton, and the tenant, Mr. James M'Kelvie, under the leadership of Mr. Thomas Ross, F.S.A. The house, it was explained, has a massive central keep, with later additions round it. In the time of Robert II. John de Haltoun was proprietor, and in a few years it passed to the Lauder family, the Lauders of the Bass, in whose hands it remained for several centuries. Early in the seventeenth century Charles Maitland, brother of the Earl of Lauderdale, became proprietor, and began the extensive additions of which much remains. He appeared to a certain extent to have copied his brother's manner of laying out the gardens at Ham, and the work which was carried on by his successor had made the house with its gardens, terraces, sundials, and statuary, one of the most interesting and pleasant in its own part of the country. Mr. Ross expressed his indebtedness for many of his descriptive and historical notes to Mr. J. R. Findlay, at one time tenant of Hatton, and who, he said, prepared an interesting monograph. On the motion of Dr. Rowand Anderson, a vote of thanks was awarded to the proprietor and to the tenant for permitting the visit, and to Mr. Ross for conducting the party.

GLASGOW SCHOOL OF ART.—The fifth lecture of the supplementary course on "Hellenic Architecture" by Mr. W. J. Anderson, architect, was delivered last week in the School. Continuing the subject of the "Culmination in Attica," the lecturer looked away from the historical and social influences which, though none the less real, were beyond the purview of the artist of the time, and endeavoured to take the standpoint of the master confronted with a particular problem. Applying this treatment to the Propylæa, the object of the building was considered; the nature of its site; the alignment which Mnesicles, its architect, decided upon in its relation to the Parthenon and to the Acropolis wall, the angle of which its axis bisected. This central position appears also to have been designed to give within the gates a *stoa* of equal length on each side, and without, two halls occupying each the same space, but of a varying arrangement controlled by the position of the bastion carrying the Nike temple. The various obstacles preventing the accomplishment of the scheme, and resulting in the present irregular arrangement, were considered, in so far as they can be read in the building itself; while the fitness of the architecture, and the beauty of its details and painted decorations were shown by many illustrations. The Erectheum was treated similarly, and from its arrangement and other circumstances, regarded as a *megaron* in honour of Erectheus, a monument and museum of many cults rather than a temple of one or two; and in addition to photographs of its present state, restorations of its exterior and interior, and of its relation to the complete Acropolis, were supplied. Additional examples of the culmination in Attica were illustrated in the Hall of Initiation into the Eleusinian mysteries, and the Temple of Apollo at Phigalia, the latter being included on the ground that it was the work of a great Athenian architect. The second part of the lecture was devoted to the Greek theatre and games; the buildings of the theatre, the stadion and the palestra; and in this connexion were shown and explained plans and restorations of the huge assemblage of buildings at Olympia, the apotheosis of athletics.

SHEFFIELD SOCIETY OF ARCHITECTS AND SURVEYORS.—The members of this Society paid a visit on Saturday afternoon last to the new buildings of the Prudential Assurance Company, in Pinstone-street, Sheffield, by the arrangement of the architects, Messrs. Alfred Waterhouse & Sons. Mr. Haigh (the clerk of works), as the representative of the architects, conducted the party over the building, and explained the various arrangements, and the materials employed, and answered a number of questions asked by some of the younger members during their examination of the building.

ENGINEERING SOCIETIES.

INSTITUTION OF CIVIL ENGINEERS.—At the ordinary meeting of this Institution, on the 6th inst., Mr. John Wolfe Barry, C.B., F.R.S., the President, in the chair, the paper read was on "The Blackwall Tunnel," by Mr. David Hay and Mr. Maurice Fitzmaurice. Communication between the north and south banks of the Thames below London Bridge was very poor, the paper stated, and many attempts had been made during the last hundred years to give greater facilities for crossing. Tunnels had been begun between Tilbury and Gravesend in 1798, and between Limehouse and Rotherhithe in 1805, while Brunel's great tunnel between Wapping and Rotherhithe was begun in 1825 and finished in 1842. Various other schemes for tunnels had been brought forward, but that at Blackwall was the only one which had been commenced. The contract for the work was let in 1891 for 871,000*l.*, and operations were started early in 1892. The entrance to the tunnel on the north side of the river was in the East India Dock-road, close to the East India Dock gate, while at the south side the entrance was in East Greenwich. The total length of the tunnel was 6,200 ft., of which about one-half was "cast-iron lined," the remainder being "cut and cover" and "open approach." A considerable amount of work was necessary for the diversion and reconstruction of main and branch sewers which were interfered with by the tunnel. The open approach at each extremity of the tunnel was constructed with concrete and brick retaining walls with a facing of white glazed bricks and a concrete invert. A layer of asphalt was carried round it to ensure watertightness. The cut-and-cover work consisted of four or five rings of brickwork in cement and was circular in section; it was backed with a minimum of 2 ft. of concrete, and a layer of asphalt was interposed between the brickwork and concrete. There were four shafts on the line of the tunnel, and these were placed at the horizontal or vertical changes of direction. They were constructed of steel and iron double-skinned caissons, of 58 ft. external and 48 ft. internal diameter. They had also an internal lining of white glazed brickwork. Two openings for the tunnel were provided in each caisson, which were closed when sinking by easily removable iron plugs. Air-tight floors were placed above the tunnel openings, so that compressed air could be used either while sinking or while the tunnel was being driven through. Two of the shafts had been sunk by keeping the water pumped down and excavating inside in the ordinary way; one by excavating the material (gravel) by a grab worked from a crane on the top, and the fourth partly by grab and partly by manual excavation. In both the latter cases, however, the concrete and iron floors at the bottom of the shafts had to be inserted under compressed air. The "iron-lined" portion of the tunnel was constructed by means of a shield, and compressed air had been used for nearly the whole length, the pressure varying between a few pounds and about twenty-seven pounds above the atmospheric pressure. The external diameter of the cast-iron lining was 27 ft., and the internal diameter 25 ft. and 25 ft. 4 in., each ring of lining forming a length of 2 ft. 6 in. of tunnel. There were fourteen segments and one key-piece in each ring; all the sides of the

segments were planed, and all the joints caulked. The internal lining consisted of 4 to 1 concrete with glazed-tile facing. The tunnel was driven through materials of a very mixed nature, varying between hard water-tight clay and coarse ballast in direct communication with the river. Near the centre of the river the tnnnel passed within 5 ft. of the river bed, bnt for some distance on each side of this point a layer of clay 10 ft. thick had been shot from hopper-barges to facilitate operations. On two occasions the tunnel was flooded by sudden "blow-outs" and the consequent inrush of water. The shield used was 27 ft. 8 in. in external diameter, and 19 ft. 6 in. long. It was shoved forward by hydraulic jacks which exerted at times a total pressure of over 5,000 tons. It carried two hydraulic erectors for placing the cast-iron segments. Every precaution was taken in the construction of the shield to minimise the result of accident from a sudden inrush of water, and provision was made for working with either a closed or open face. A very large air-compressing plant was required to maintain the supply of air, and at times as much as 10,000 cubic feet per minute was pumped into the tunnel. The roadway, which was 16 ft. wide, was carried on a brick arch, which formed the roof of a subway for pipes, electric-light wires, &c., and a footpath 3 ft. wide was provided on either side. An electric light installation had been erected for the permanent illumination of the tunnel and the supply of current for working the drainage-pumps, &c.—It was announced at the same meeting that thirteen associate members had been transferred to the class of members. It was reported that twenty-six candidates had been admitted as students. The last ballot of the session resulted in the election of ten members and of sixty-nine associate members.

THE SANITARY INSPECTORS' ASSOCIATION.

AT the April general meeting of this Association, held on the 3rd inst. at Carpenters' Hall, Mr. Charles Seale-Hayne, M.P., was elected an honorary member, and twenty-two new ordinary members were added to the roll.

A paper on "Nuisances from Certain Offensive Trades" was read by Mr. T. W. Crocker (West Ham Board), in which a number of suggestions were made for the improvement of the methods usual in certain industries carried on in the district in which the lecturer was engaged. There were many trades of an exceedingly offensive character which did not come within the official meaning of the term "Offensive Trades," such as that of brick-burning, which, in a test case, had been excluded from the category, although evidence of "noxious fumes" was tendered, because the Court held that this business was not named in the section and was not analogous to any of those named. It seemed to follow from the result of this test case, that only trades in which animal matters were dealt with came under the category of "Offensive Trades," as defined by the Public Health Acts of 1875 and 1891. With regard to certain of these trades, the processes used in which were described, the lecturer expressed the opinion that the nuisances arising from them might in most cases be minimised, and in some altogether prevented, by the adoption of suitable appliances, and by improved forms of buildings or apparatus. With proper flue arrangements noxious fumes might be burnt up before discharge, and even where they could not thus be completely cremated, they might be rendered harmless by building tall chimney shafts instead of dwarf ones.

A conference on "Tenure of Office" was afterwards initiated by Mr. G. T. Dee (Westminster).

THE LONDON COUNTY COUNCIL.

THE usual weekly meeting of the London County Council was held on Tuesday in the County Hall, Spring-gardens, Dr. Collins, Chairman, presiding.

The Works Department.—The Finance Committee recommended, and it was agreed (*a*) That the amount to be charged (in lieu of rent) to the Works Department for interest on and repayment of original capital outlay on the central wharf and buildings for the year ending March 31, 1897, be 4,135*l.* 10s. 3d. (*b*) That the amount of interest to be charged to the Works Department on working capital during the present financial year be 1,915*l.*,

The report of the Special Committee appointed to inquire into the management and financial position of the department since its inception, and as to its future prospects, was printed in the agenda paper. A statement, in the nature of a "minority" report, has been prepared by four members of the Committee, but this was not printed with the report of the other members of the Committee. We are unable to print the whole of the report in our columns, owing to its length; but we give the recommendations of the Committee, and on another page some comments on the subject will be found.

The following are the Committee's recommendations:—

"(*a*) That in the opinion of the Council some definite organisation for the direct employment of labour and the direct execution of public works by the Council under the superintendence of its own officers is desirable and beneficial.

(*b*) That a Works Board be substituted for the Works Committee, such board to be elected forthwith, one member to be nominated by and from each of the following Committees:—Finance, Asylums, Bridges, Fire Brigade, Highways, Improvements, Main Drainage, Parks, and Housing of the Working Classes; and that in future years the election of members of the board do take place at the meeting of these Committees next to March 31.

(*c*) That any Committee desiring to propose to the Council the carrying out of any works without the intervention of a contractor, shall, in the first instance, obtain an estimate from the proper officer and then refer such estimate to the Works Board for their consideration before reporting to the Council.

(*d*) That the Works Manager shall, unless in any case otherwise ordered, carry into execution all works which the Council resolves to execute without the intervention of a contractor.

(*e*) That when the Council wishes to execute any works without the intervention of a contractor, the plans, specification, and estimate shall, unless otherwise ordered by the Council, be thereupon referred to the Works Manager.

(*f*) That the Works Manager shall be responsible to the Works Board, and the board shall report from time to time to the Council.

(*g*) That this report be referred to the General Purposes Committee, and that it be an instruction to that Committee to amend the standing orders in accordance with the foregoing recommendations.

(*h*) That it be referred to the General Purposes Committee to make further amendment of the standing orders by the insertion of words coupling the unions of employers, where such exist, with the trades unions, in reference to the rates of wages and hours of labour.

(*i*) That it be referred to the General Purposes Committee to make further amendment of the standing orders by omitting provisions giving powers to the clerk of the Council to direct examination of the books of any one contracting with the Council for the execution of works, other than the time-sheets or books or wages-sheets or books.

(*j*) That the statement of Mr. Edwin Waterhouse be referred to the comptroller for report upon each and all of his suggestions with reference to the accounts, and that the comptroller's report be referred to the General Purposes Committee with a view to the adoption of Mr. Waterhouse's recommendations."

Mr. Beachcroft moved that the consideration of the report of the Special Committee be adjourned over the Easter recess.

Mr. Boulnois, M.P., inquired how it was that the report of the Committee had alone been sent to the Press, while that of the minority had been withheld.

Mr. Beachcroft said it was a pure accident that the report of the minority was not sent.

Mr. E. White asked whether any statement would be made as to why the late manager of the Works Department was not called to give evidence before the Committee.

Alderman Beachcroft thought the question scarcely in order.

The motion was agreed to.

Tramway Purchase.—The discussion on the report of the Highways Committee on this matter was resumed, the recommendations, which we printed last week, page 320, being eventually agreed to.

Queen's Jubilee Procession: Temporary Structures.—Mr. Cornwall, referring to the report of the Building Acts Committee regarding the erection of temporary structures for the accommodation of sightseers desirous of viewing the Royal procession on June 22,* said he hoped that private stands in private houses would not be unduly interfered with, except to take precautions to prevent loss of life.

Major Probyn thought too much care could not be taken for the prevention of accidents, even such as might only involve a broken limb.

Mr. Payne (Chairman of the Committee) said the Council would only take steps with regard to dangerous structures, and would not oppressively exercise their authority. As they were advised, their control extended not only to out-door structures, but also to in-door stands and platforms, and it would be necessary that that control and supervision should not be neglected. The District Surveyors had been instructed to inquire and report upon the stands proposed to be erected, and upon these reports a system of inspection would be arranged.

Salaries of Inspectors in the Public Health Department.—On the recommendation of the Public Health Committee, it was agreed that the scale of salaries of the above-mentioned inspectors appointed by the Council under the Public Health (London) Act, 1891, be altered so that they may rise continuously by annual increments of 10*l.* to the maximum of 250*l.* per annum.

Sanitary Condition of Clerkenwell.—The same Committee reported as follows:—

"After some correspondence with the Vestry of Clerkenwell on the question of the adequacy of their sanitary staff, we thought it well that an inquiry should be made by one of the Council's Assistant Medical Officers of Health into the sanitary condition and administration of the parish. An inquiry was accordingly made by Dr. Young, and the Medical Officer has submitted to us Dr. Young's report, which shows that the staff, as it existed at the time of his inquiry, appeared to be inadequate for the proper performance of the duties devolving upon the Sanitary Authority. Dr. Young is, however, not prepared to assert that the appointment of a clerk to the Sanitary Department, which was contemplated, would not be found sufficient for immediate purposes, and it is right, therefore, that further experience should be gained before the appointment of an additional Sanitary Inspector is recommended by the Council. The following is a brief summary of the matters to which Dr. Young considers the attention of the Vestry should be given:—'1. The existence in houses of defective conditions. For the most part these are of such a character as to be readily capable of remedy under the powers given by the provisions of the Public Health (London) Act. 2. The existence of courts and alleys which are narrow and badly arranged, and of houses which are old and worn out. Concerning these the Vestry should see the necessity of applying for closing orders or taking other proceedings under the Housing of the Working Classes Act. 3. The existence of a considerable number of houses in the district occupied by members of more than one family. Many of these are not of such a character as to need frequent periodic inspections. Others again are not so well circumstanced as regards the conditions in which they are kept, and these need registration and regulation under the provisions of section 94 of the Public Health (London) Act. 4. The absence of a register containing a complete list of the workshops in the district, and setting out the condition of these premises. The preparation of such a register should be proceeded with forthwith. 5. The failure of the present system of house refuse collection to ensure its removal every week from all premises. A reorganisation of the system should at once be undertaken so as to ensure this object. 6. The desirability of requiring in the by-laws as to houses let in lodgings a minimum cubic space per head of 400 ft. in rooms occupied by day and by night, instead of 350 ft., which is stated to be the amount specified in the draft by-laws.' We have had the report printed and have sent copies to the Vestry with a request for their observations thereon. We propose to report again to the Council after a reply has been received. In the meantime we have given instructions for copies of the report to be sent to members of the Council, and to be placed on sale."

Opening of Blackwall Tunnel.—The Bridges Committee recommended, and it was agreed, that 2,500*l.* be expended on the arrangements for opening Blackwall Tunnel, by the Prince of Wales on May 22.

Vauxhall Bridge.—On the report of the Corporate Property Committee, it was agreed:—"That Watney's Wharf and the Bridge House, Vauxhall, be utilised for the purpose of the reconstruction of Vauxhall Bridge, and that the sum of 2,560*l.* be fixed as the value of the land for that purpose."

The Finance Committee incidentally reported that the total cost of rebuilding Vauxhall Bridge is estimated at 484,000*l.*, and the votes already passed on account amount to a total of 116,622*l.* 4s.

Ground Plan of London.—The same Committee recommended, and it was agreed, that a further sum of 600*l.* be expended in connexion with the preparation of the ground plan of London. At present 1,670 estates have been defined upon the sheets, and 134 estates are still to be dealt with,

* See our last issue, page 320.

Paving-work, Clerkenwell Fire Station.—On the recommendation of the Fire Brigade Committee, it was agreed that the tender of Messrs. G. S. Munday & Sons to execute for 205*l.* the paving-work required at the Clerkenwell station be accepted.

Supply of Gravel, Parliament Hill and Waterlow Park.—On the recommendation of the Parks and Open Spaces Committee, it was agreed that the Council do rescind its resolution to enter into a contract with Messrs. Ballard, Limited, to supply gravel at the rate of 7s. and 6s. 10d. per cubic yard for Parliament Hill and Waterlow Park respectively, and do authorise the Committee to obtain the material from Mr. H. Barnaby, at the rate of 7s. 6d. and 7s. per cubic yard for these places respectively ; and that the solicitor do take the necessary steps in the matter.

Inspection of Railway Stations.—The Parliamentary Committee reported :—

"The Council on January 29, 1895, referred it to us to take the necessary measures for the introduction of a public Bill in the session of 1896 for the following purposes—(*a*) To give the Council, for the purpose of enabling it to make representations under the Railway and Canal Traffic Act, 1888, power to inspect from time to time the stations of every railway company in the county of London ; (*b*) to require each railway company, before constructing a new station or reconstructing or altering an existing station in the county of London, to submit plans of the proposed works to the Council for its approval ; and (*c*) to prohibit the erection or alteration of any station otherwise than in accordance with the plans approved by the Council. We have had a Bill drafted to carry out the resolution, but we fear that there is no prospect of its passing in the present session of Parliament. We accordingly recommend that the Bill be not introduced this session."

Colonel Ford said it was very important to give the Council such powers.

The report having been adopted, the Council adjourned.

BUILDERS' CLERKS' BENEVOLENT INSTITUTION :

ANNUAL DINNER.

THE nineteenth annual dinner of this Institution was held on Tuesday in the King's Hall, Holborn Restaurant, the chair being occupied by the President, Mr. Thomas Hall (Hall, Beddall, & Co.), who was supported by Messrs. T. E. Collcutt, W. Woodward, B. E. Nightingale (retiring President), Thomas F. Rider, W. R. F. Freeman, J. Howard Colls, Robert Downs, C. Bussell, Joseph Clayton, F. H. Reed, Stanley Clarke, T. Stirling, H. T. Stirling, A. Ritchie, J.P., Henry Lovegrove, Quincey de Quincey, W. T. Farthing, and the Secretary, Mr. H. J. Wheatley.

The loyal and patriotic toasts having been honoured (Mr. R. Downs proposing, and Major Roe replying for, the "Navy, Army, and Reserve Forces "),

The Chairman proposed the toast of the evening, "The Builders' Clerks' Benevolent Institution." The Institution, he said, was founded in 1866 with the object of granting pensions and temporary relief to necessitous clerks and their widows, and for the maintenance and education of their children, the pensions of clerks being 25*l.* and their widows 20*l.* a year. Already forty-three pensioners had been elected, twenty of whom were still upon the books. Further, a great deal of good had been done in granting temporary relief in necessitous cases. The total amount paid in this respect amounted to 6,800*l.* In no case, however, had the committee granted more than 10*l.* to any one man in one year. The total expenditure last year on account of the relief fund was 467*l.*, and the income arising from annual subscriptions and dividends was only 248*l.*, the balance having been met by the donations received at their last dinner. Their reserve fund was 5,400*l.*, and the committee were most anxious not to reduce that, as they did not consider it any too large. Those present would see, therefore, how largely the institution depended upon the donations received at the annual dinner. Knowing that, he hoped those present would contribute as generously as they were able. Speaking to builders' clerks in particular, he eulogised the Institution as a means of providing against bad times, and making provision for their widows and orphan children. As to the orphan fund, eight children had been presented by the Institution. The benefits of the Institution were extended to non-subscribers, but builders' clerks who had been subscribers, and who required assistance, were entitled to ten votes for each guinea given.

Mr. W. R. Freeman then proposed "The Architects and Surveyors," and in doing so referred to the close connexion between architects and surveyors and builders. In regard to architects, they were improving the architecture of the country, which was much more pleasing to look upon now than it was at the beginning of the century. The work of quantity surveyors was of considerable importance to builders.

Mr. Woodward, in replying for the architects, said that it was quite true that during the last quarter of a century great improvements had been made in planning, decoration, construction, and in sanitation, and the architecture of London, in particular, had greatly improved. Speaking of the 1894 London Building Act, he said that some of the clauses were so difficult to interpret that he hoped the time was not far distant when the Act would be amended and some of the clauses reconciled.

Mr. H. Lovegrove replied for the surveyors, and said that he thought they were beginning to understand the Building Act, and, on the whole, he thought it was an Act which tended to improve building in London. The Act controlled the jerry builder, as a Building Act should. The Act caused hardships, but, on the whole, it worked well, and architects and others should try to understand it.

Mr. A. Ritchie proposed the toast of "The Builders," and in doing so referred to three classes of builders, viz., the jerry builder, the gentleman builder, and the practical builder, the practical builders being the men whom they esteemed. In regard to the London County Council, it was satisfactory to find from the report of the Special Committee appointed to inquire into the Works Department of that body, that it was recommended to amend the standing orders by the insertion of words coupling the unions of employers, where such existed, with the trades unions, in reference to the rates of wages and hours of labour.

Mr. Howard Colls, in response, said that builders did not always receive the recognition they should. In particular he thought that builders should receive suitable recognition whenever they carried out satisfactorily large and important works.

Other toasts were "The Merchants," proposed by Mr. Ellis Marsland and responded to by Mr. J. Fraser ; "The President," proposed by Mr. T. F. Rider, the Chairman responding ; "The Past Presidents," proposed by Mr. E. Brooks, treasurer, and responded to by Mr. B. E. Nightingale ; and "The Visitors," proposed by Mr. F. S. Oldham, and coupled with the name of our representative, who responded.

During the evening the Secretary read a list of subscriptions and donations promised, the total amounting to over £380.

Correspondence.

To the Editor of THE BUILDER.

ARCHITECTURE ON THE BEDFORD ESTATE.

SIR,—You will, I trust, allow me to express my perfect sympathy and agreement with your article in the last issue of the *Builder*, evoked by the extraordinary design—illustrated in that number—for the rejuvenation of Bedford-square. It is, unfortunately, but a fraction of that ever spreading process of the "uglification," or, as it might well be called, "vulgarisation," of London, whose first unpleasing essays we are now witnessing, and which seems to drink in its ideals from the plate-glass and terra-cotta fripperies of the gin-palace. It is difficult to estimate the exact proportions of ignorance and stupidity—one must also add vanity—which direct these efforts. There is hardly a quiet or dignified corner of London in which the works of the last-century architect or builder, as the case may be, are not in process of being either wholly destroyed or else hopelessly degraded by the intrusion of incongruous neighbours. From the manner in which he thrusts his uneasy compilations into the company of the sober and well-calculated compositions of a bygone age, one might imagine that the modern architect believes himself to be possessed of a style of his own, whereas it is, I fear, the truth that he is for the most part too ignorant to appreciate the merits of what he destroys, and too conceited to intelligently copy even the examples that stand side by side with his own laboured inventions. Whether in Gray's Inn, in Lincoln's Inn-fields, or in the older parts of Westminster and Bloomsbury, these unpleasant contrasts between old and new—so little to the credit of the new—are being perpetually presented to us. It does not follow, as you so well point out, that in order to make a house more sanitary or more commodious, it is necessary at the same time to make it hideous. But it is to be feared that the vanity of the individual architect, which impels him to intrude his own personality at the cost of artistic unity, and makes him study rather how to display his own cleverness than how to produce work which shall harmonise with what already exists, only too often precludes the possibility of altering (or adding) without at the same time deforming.

I only wish I could persuade myself that any protest, however vigorous, could have any real effect in diminishing the abuses of which you so justly complain. It has always seemed to me that the rationale of modern domestic architecture should be, and can be, placed on some sounder foundation than the boasting phrase, "I don't know what is beautiful, but I know what I like." That that combined expression of dignity, repose, and domesticity which a dwelling house should by rights possess is perfectly capable of being settled on a sounder basis than this humiliating axiom, I most sincerely believe ; though, in view of the great distance which modern taste has travelled from its former better regulated position, it would be impossible to demonstrate this in the space of a single letter, even of a very long one.

But, in the meanwhile, it is certainly the duty of all who are in the least degree careful of the beauty of our Metropolis, to protest against such transformations as are projected on the Bedford Estate, and to protest with vigour.

AMBROSE M. POYNTER.

*** We do not know that Mr. Poynter's references to the modern architect are entirely in point in this case ; our complaint rather is that the houses and other buildings are being remodelled according to the ideas of the Bedford Estate Surveyors. Two of the new blocks of flats between Gower-street and Tottenham-court-road are in a good though simple and unpretentious style of architecture ; Bedford Court Mansions, for which the exterior design was made by Mr. Vigers, and another block (of which we forget the name) by Mr. Brydon. These are quite unobjectionable architecturally ; the objection to them is that they are part of the system of over-building ; crowding the ground and shutting out light and air. Of the Bedford Estate official architecture the visitor may form a good idea by looking at the treatment of the high wall bounding the new road north of Bedford Court Mansions, which has been made ornamental (?!) to increase the attractiveness of the neighbourhood.—ED.

VENNER *V.* McDONELL :

"STRUCTURE" IN THE LONDON BUILDING ACT.

SIR,—Referring to your article on the appeal verdict in connection with the above, in last week's issue of the *Builder*, may I be allowed to say a few words, as I am persuaded that not one in twenty of those who read the result of the appeal realised the circumstances of the case. The "structures" in question were not exactly as described—"movable seats" merely—but certain stagings or galleries of the ordinary type, averaging perhaps 13 ft. in height, and accommodating some thousands of people. The only difference, practically, between these erections and others of a similar kind—say those to be erected for the Queen's celebration (both having to be sanctioned by the London County Council directly or by their officers) was that (*a*) they had been previously used ; and (*b*) that, in the case of the one of which a model was shown, certain preparations had been made in the building itself, in the shape of eyes or sockets, for fixing such possible future constructions. For the upper staging, at the gallery level, of which as I pointed out, no model was shown, but which nevertheless contained nearly half of these seats, no such provision had been made—a point which, however, did not come out in the evidence.

The Military Tournament, for which they were required, being an exhibition of which I could not plead ignorance, and in connexion with which, in the event of an accident, I might be called to account, I was desirous to have the question of my responsibility or otherwise settled.

The Act (Section 78) says : —"Every public building, including . . . every structure and work constructed or done in connexion with, or for the purposes of the same, shall be constructed in such manner as may be approved by the District Surveyor," which I took as applying to workmanship and materials, as well as to design, careless execution or improper or damaged materials being likely to mar the best scheme. In this view the magistrate at the first hearing appeared to coincide. It was distinctly brought out, and to this I call particular attention, that the whole point of the case lay in the fact that the structures in question were (as was admitted) in a *public building*, and consequently subject to special legislation : yet what is the astonishing conclusion arrived at in the verdict ? This ; that if the first finding was correct—viz., that staging for thousands of people so erected in a *public building* required the supervision of the District Surveyor, then (*mirabile dictu*) it followed that "no person could put up a fixed cupboard or a fitted bookcase in *his house* without giving notice to the District Surveyor, and without being subject to his supervision !"

Really, comment seems almost superfluous. This I will say, however, that whilst to put the staging erected for the Military Tournament (always crowded in every part) on the par with the fixing of a bookcase is sufficiently startling; to make the utterly irrelevant comparison of such a structure, happening to be in almost the largest *public building* in the kingdom, with the fixing of a bookcase or cupboard in a private house, with which, of course, it has absolutely nothing to do, is perfectly absurd.

GEORGE MCDONELL.

*** We think Mr. McDonell misunderstands the point of the comparison made by the Court. We take it that it was only intended to show that the two cases would come *legally* under the same category. Practically, no doubt, there is much in Mr. McDonell's argument; but in a legal sense we do not see how a detached framed seating, removeable when required without taking it to pieces, can properly come under the head of a "structure" in the sense in which the word is used in the Building Act.—ED.

ST. NICHOLAS, KEYINGHAM.

SIR,—May I beg space to call the attention of archæologists and lovers of old churches to the deplorable condition of St. Nicholas, Keyingham, Holderness?

The building consists of nave and aisles, tower, chancel, and chantry chapel. The condition of the north aisle is very serious indeed; the west wall without shows several wide cracks, one of which separates the coping-stones of the battlement by six inches. The east wall is pierced, and the secondary mullions, rising from the springs of the first arches, are all out of line, while the whole window seems to be falling outwards. The cracks thus formed show inside as well; the north wall bulges in one place and leans considerably, and the rain drips in through the roof, which is broken in several places with the strain.

Can nothing be done to save this beautiful old church from ruin? Holderness has many such historic remains, but England cannot afford to lose one of them. The neighbouring churches of Winestead, Patrington (Decorative and Perpendicular, with an eastern "sepulchre") and Hedon (Norman, Early English, and onwards), have been put into good and careful hands; cannot something now be done for St. Nicholas? The Vicar, Mr. Tomlinson, or Mr. B. Mundell, Mount Pleasant, Keyingham, E. Yorks, will be glad to facilitate in every possible way the researches of any one interested enough to visit and investigate the place, and I sincerely hope this appeal may stimulate some archæologists to such action.

HARRY LOWERISON.

A PARTY-WALL QUESTION.

SIR,—A, in erecting a building, agrees with B, owner of adjoining land, to build a party-wall half on B's ground and half on A's, with the understanding that when B builds he shall pay A half cost of party-wall. B later on builds, and decides to carry his building higher than that of A, and claims the right to build on tbe whole thickness of the party-wall as A has done; but A says he cannot use more than one half without paying compensation. Which is right?

"NEWPORT."

The Student's Column.

SPECIFICATIONS.—XV.

ELECTRIC WIRING.

NEARLY all large installations are put in the hands of a consulting engineer. He, to prevent disagreement or confusion, draws up a set of rules and conditions called the "Specification." No departure from it by the contractor is allowed without the consulting engineer's permission, and the contractor is not compelled to do any work not specified in it. As a rule, therefore, it goes as much into detail as possible. For the benefit of the readers of this column, we append the general form and wording of a specification for the installation of the electric light in a private residence in the West End. For the sake of brevity, we have omitted the upper floors.

The contract will be preceded by certain general clauses which do not differ in intention and effect from those usually attached to any other contract for building work; but there are other clauses which it is advisable to attach specially to a contract for electric wiring, in view of the special nature of the work, and the serious risks which must arise from any incompetent performance of the work. Such are the following:—

All the work mentioned in this specification shall be executed and completed by workmen of undoubted competency, efficiency, and good conduct, and no part of the work shall be done by task work. The Contractor shall not make any sub-contract for the execution of the whole or any part of the work to any person whatsoever, without the express permission in writing of the engineer.

Then will follow clauses of much the same character as in a general specification, empowering the engineeer to condemn and require the removal of any improper material or such as is not in accordance with the specification, providing for the recovery at law of losses caused by bad work, or the proportionate deduction from the sum to be paid to the contractor, for carrying out the work without delay and without interference with the work of other contractors, and for the compulsory discharge of incompetent foremen or workmen.

Upon the signing of the contract, the contractor shall supply any sample of material or workmanship hereinafter described that the engineer may demand.

The contractor shall at all times keep on the work a copy of the plans and specifications, drawings and measuring instruments, and such apparatus as shall be necessary for making any test of the work that the engineer may demand.

The contractor shall guarantee to maintain and uphold the work in perfect condition, both electrical and mechanical, for the time of twelve calendar months from the date of the completion of the contract.

Then follow the usual provisions as to payment, and as to the action to be taken in case of the death or insolvency of the contractor, which need not be specially gone into.

Description of Work, Quality of Materials, &c.

Cable Mains and Branch Leads.—All mains, sub-mains, and branch leads shall be of copper, having a guaranteed conductivity of at least 98 per cent. pure copper, according to Mathiessen's standard, and they shall be insulated with pure and vulcanised india-rubber and taped; the whole vulcanised waterproof so that the insulation of the said mains, sub-mains, and branch leads shall be 2,000 megohms per statute mile, and shall be equal to Henley's Class A cables.

No main, sub-main, or branch lead shall consist of a single wire, but shall be composed of small wires stranded together, and the size of each main, sub-main, or branch lead shall be so proportioned that when the maximum current is passing, no more than 600 amperes per square inch section is flowing through any conductor. The smallest sized wires to be used shall be $\frac{3}{22}$. The sizes of other branch leads, other than $\frac{3}{22}$, are shown in schedule A.

The sizes of mains and sub-mains are shown in schedule B.

Joints.—Joints under floors, or in any inaccessible position, are to be absolutely avoided. The ends of the mains, sub-mains, and branch leads, before being connected to switches, fittings, and fuse boards, &c., shall be carefully stripped of all braiding and felt, care being taken not to injure the rubber insulation, to a distance of at least 3 in., and the exposed rubber shall be carefully cleaned with naphtha, and in no case shall bare wire come in contact with other than the provided metal connexion of fitting, but shall be protected by its vulcanised rubber covering.

Piping.—All wires or cables shall be run in seamless tempered steel pipes preferably well insulated on the inside, of approved design, in continuous lengths, with all necessary angles and bends soldered thereto. After these pipes are fixed, they shall be painted with a good coat of oil paint. Samples of these pipes shall be sent to the building, and tested and approved by the engineer for resistance to nails, &c. The pipes on top floor are to be run in the roof, and the switch wires are to be run in lacquered brass tubes, for this floor only.

Wall Boxes.—Where the pipes project beyond the point where the branch leads, sub-mains, or mains are drawn from them, a teak block shall be fixed to the wall over the end of the pipe. Where the tubes or casings enter these blocks, they shall be connected with rubber or a suitable compound. These blocks shall serve as fixings for brackets and switches and plugs.

Where mains, sub-mains, or branch leads are run through brick walls or concrete floors, they shall be enclosed in extra strong large steel pipes.

Distributing Boards.—Every branch lead shall be run on both poles, from a point on a double pole distributing fuse-board, so constructed that the boards are built up of separate pieces of metallic conductor, and bars of same mounted on separate pieces of porcelain—one pair for each point—the porcelain being so shaped that one end forms a fireproof division separating the poles. The whole to be enclosed in a hard wood box with glass front, and fitted with lock and key of approved make. The size of these boards are shown in Schedule C, and they are to be obtained from Messrs. Z. & Co.

All points on these boards must be labelled with approved ivory tablets.

Samples of these boards are to be submitted for the engineer's approval.

In fixing these boards a fillet of hard wood shall be attached to the wall, and the boards secured to same, having a sheet of india-rubber, $\frac{1}{16}$-in. thick, placed between them.

Provide and fix all necessary clip fuses with porcelain backs.

Double Pole Switch.—Provide and fix a double pole switch, quick make and break, mounted on porcelain, to be enclosed in a hard wood or iron box, with glass front and lock and key. This switch shall be capable of carrying 50 amps. of current at 200 volts pressure.

Main Switch Distributing Board.—Provide and fix a main switch distributing board, consisting of two pieces of slate of best quality, enamelled on both sides and through all holes, and separated by a hard wood fire bar, on which shall be fixed, connected to suitable copper omnibus bars of correct section, three 20 ampere D.P. switches (properly labelled with ivory tablets).

The whole to be enclosed in a hard wood case, with glass front, and provided with a lock and key of approved make.

A sketch of this board must be sent in with tender, for the engineer's approval.

Single Pole Switches.—Every light shown in schedule A shall be provided with a quick make and break switch of the "Tumler" type, mounted on a porcelain base, and provided with an extra heavy metallic cover to be selected.

These switches must be constructed that there is no possibility of contact between the outside cover and the live contacts.

A sample of these switches shall be submitted to the engineer for his approval.

Switches in places to be assigned by the engineer may be mounted on hard wood blocks, with moulded edges of approved design.

Wall Plugs.—Provide all necessary wall plugs of approved make.

Distribution.—At a point in the basement, to be fixed by the ——— Electric Supply Co., and at which they will fix their cut-out, the main 19/18, having loops left for meter connection, shall be carried to the double pole switch, and from thence to the three switch distribution board. From each of these switches a 7/18 sub-main is to rise to the three boards coloured blue, red, and green on the diagram, from which boards all points of similar colours are to be run on both poles.

Note.—All wires are to be drawn into pipes after plastering is complete, and so that they can be drawn out again if necessary.

Tests.—At such times as the engineer may demand, tests of the work shall be made by the contractor, both for continuity and insulation between the poles and to the earth, and the final test being made at a pressure of 200 volts, shall be such that it meets with the entire satisfaction of the engineer, of the Electric ——— Supply Company, and of the ——— Fire Office.

Provisions.—Provide the sum of 10*l.* p.c.v. for extra wiring, &c., to be deducted in full, or in part if not required.

Provide the sum of —— p.c.v. to be paid to the engineer for copies of plans and specifications.

Notes.—The contractor shall do all the necessary cutting away and shall make good in the best Parian cement, to the engineer's and architect's entire satisfaction, but so as to avoid disturbing the existing arrangements, and shall work to the engineer's express instructions.

All local switches shall be fixed on lock side of door, or where the engineer may direct.

When convenient, more than one pair of conductors may be run in one pipe, and for the purpose of identification, the contractor shall in every case run all the positive leads with red, and all the negative with black wires and cables.

The contractor at the finish of the work shall clean up and remove all débris and superfluous material, &c., that has been caused

during the progress of the work, and shall leave all to the satisfaction of the engineer.

SCHEDULE A.

Position of Point.	No. of Points.	Size of Lead other than 3/22.	Description.	Switches.
First Floor.				
Drawing-room ..	2	7/22	6 pendants	6
Ground Floor.				
Dining-room ...	1	7/22	1 4-lt. electrolier....	2
Morning-room ..	1	—	Pendant ..	1
Billiard-room...	1	7/22	6-lt. fitting.	2
Water-closet....	1	—	Pendan ..	1
Passage.....	2	—	2 pendants	2
Entrance	1	—	1 pendant ..	1
Basement.				
Kitchen	1	—	2 pendants	2
Scullery	1	—	1 pendant ..	1
Pantry	1	—	1 ,,	1
Housekeeper's room	1	—	1 ,,	1
Store-room	1	—	1 ,,	1
Passage.....	1	—	1 ,,	1
Water-closet ..	1	—	1 ,,	1

SCHEDULE B.

				£	o	o
Kitchen.....	2 pendants....	each	p.c.v.			
Scullery.....	1 pendant	,,	,,	0	0	0
Pantry	1 ,, ...	,,	,,	0	0	0
Housekeeper's room	1 ,, ...	,,	,,	0	0	0
Store-room	1 ,, ...	,,	,,	0	0	0
Passage.....	1 ,, ...	,,	,,	0	0	0
Water-closet ..	1 ,, ...	,,	,,	0	0	0
Dining-room ..	1 4-lt.electrolier	,,	,,	0	0	0
Billiard-room ..	6 pendants....	,,	,,	0	0	0
Morning-room .	1 pendant	,,	,,	0	0	0
Water-closet....	1 ,, ...	,,	,,	0	0	0
Passage.....	1 ,, ...	,,	,,	0	0	0
Entrance	1 ,, ...	,,	,,	0	0	0
Drawing-room..	6 pendants....	,,	,,	0	0	0

These prime cost values include complete fittings, including lamp-holders and fixing; sketches are to be submitted on demand, and the whole or any part of the values may be omitted at the option of the employer.

SCHEDULE C.

Mains, 19/18. Submain to basement, 7/18.
,, ground-floor, 7/18.
,, first-floor, 7/18.

SCHEDULE D.

DISTRIBUTION BOARDS.

Main, 3 way. 20 amp. Switches and fuses. 200 volts
Basement, 10 way board.
Ground-floor, 12 ,,
First-floor, 14 ,, This board to have four ways arranged for master switch

SCHEDULE E.

BELLS.

One push, p.c.v., 15s., to be fixed at entrance. Vulcanised wires to be run in compo tubes to two 6-in. gongs; one in basement passage and one second-floor. A suitable battery to be provided.

OBITUARY.

MR. R. S. PARKER.—The death has just occurred of Mr. R. S. Parker, the principal in the firm of Patman & Fotheringham, builders and contractors, Islington. The business will be carried on in future by Mr. James F. Parker, and Mr. Alfred E. Parker.

MR. HOPE M'LACHLAN.—We greatly regret to have to record the death of this talented and original landscape painter, who had made a mark of his own in contemporary landscape painting, and for the last few years one learned to look out for his contributions to the Academy and other exhibitions as things which were sure to have some original interest. Mr. M'Lachlan delighted in studies of special effect of composition and light in landscape, especially effects of storm or of twilight and even night. He treated such scenes in an exceedingly broad and massive manner, and with rather an ignoring of local colour; and sometimes no doubt, "breadth" was carried a little too near to roughness of execution; but there was always a stamp of power on his work.

GENERAL BUILDING NEWS.

WESLEYAN CHAPEL, BARNSLEY.—The new chapel of the Wesleyan Reform body, at Doncaster-road, Barnsley, was opened on the 1st inst. The new chapel will accommodate some 400 worshippers. It has been built from the designs of Messrs. Senior & Clegg, architects, at a total cost of something over 1,000*l.*

ST. MARY'S MONASTERY, KINNOULL, PERTH.—This building was begun in the year 1867, when the house, consisting of dormitories, refectory, library, kitchen, &c., was erected. In the following year the church, monastery, chapel, and crypt were built, and now the novitiates' wing, consisting of dormitories, common-room, library, and oratory, has been completed. The church has sitting accommodation for 200; the house has apartments for the Fathers, and large dormitories for lay and other brethren, while the new wing provides thirteen rooms for novitiates, and dormitories and other accommodation for the brethren. The new wing also contains an oratory and library, and a lecture-room for the novitiates. The whole of the buildings have been heated on the low pressure hot-water system, with large pipes round the outside walls and radiators where required, a new drainage system has been carried out, and alterations in the grounds and terraces have been made. The construction of the original building, church, and novitiates' wing cost about 20,000*l.*, exclusive of the site, altar decoration, furnishings, and fittings. The original building and church were designed by the late Mr. Andrew Heiton, and the novitiates' wing by Mr. A. G. Heiton, Perth. The following local tradesmen were employed in the execution of the recent works:—Mason, Messrs. W. & C. Duncan; joiner, Mr. P. Johnston; slater, Mr. J. Carmichael; plumber, Mr. J. M'Leish; plasterer, Mr. A. M'Ritchie; painter, Mr. G. Muirhead; glazier, Mr. C. Alexander; grates, Mr. A. M'Gregor; roadways, &c., Messrs. W. & R. Taylor.

PUBLIC BATHS, KINGSTON.—The foundation stone has just been laid, in Wood-street, Kingston, of new public baths. The inside measurement of the bath-house is 101 ft. in length and 46 ft. in width. The swimming pond is 90 ft. by 30 ft. The dressing boxes on either side will number fifty-one, with foot-space in front; and above these is a gallery, 8 ft. 6 in. high, extending all round the bath, to be used for witnessing swimming entertainments, &c. The pond will be supplied by a well at the rear of the building, and water will also be laid on from the company's main. The deep end of the bath is to be 6 ft. 6 in., and the shallow end 3 ft. 6 in. The floor is to be paved with glazed bricks and the sides with white glazed tiles. Lighting will be from lanterns in the roof, and electric light. Sixteen slipper baths will be provided, first and second class, each supplied with hot and cold water. The building is being erected by Mr. Cunliffe, of Kingston, from plans by Messrs. Francis J. Smith and M. B. Adams, with the aid of Mr. Hessell Tiltman, as professional adviser and expert. The frontage of the baths in Wood-street will have three entrances to the main building and one to the gallery only, and there is to be an extra exit opening out to Thames-street. Mr. C. J. Parker is clerk of the works representing the Corporation.

FREE LIBRARY, WICK.—The foundation stone of the Carnegie Free Public Library, Wick, was laid recently The building will occupy a site on the elevated open space in front of Sinclair-terrace. Plans for the new building were prepared by Messrs. Leadbetter & Fairley, Edinburgh, which provide libraries, reading and recreation rooms, and a museum. The cost will be nearly 4,000*l.*, and the contracts for the various parts of the work have been entered into. The total number of volumes provided for is 8,400.

A NEW WELSH CHURCH FOR LONDON.—A new church and mission buildings, dedicated to St. David, and erected near Paddington-green, has just been opened. The new building, which is capable of seating about 400 people, has been designed by Mr. C. Evans Vaughan in the Gothic style. Under the church proper is a hall, which is used as a Sunday school, and during the week for meetings and concerts. At the back of this hall are the caretaker's rooms.

CHURCH, BEAMINSTER, DORSETSHIRE.—On the 29th ult. the new church of St. Mary, West Fordington, was dedicated by the Bishop of the Diocese. Plans were prepared by Mr. C. E. Ponting, F.S.A., of Marlborough, and the work has been carried out by Mr. H. Hoskings, of Hungerford, Wilts. The new church has a total length to the apse of 135 ft., the length of the nave is 95 ft., and its breadth 42 ft. The church is constructed of corrugated iron, on a framework of wood, and the interior is plastered. The roof is surmounted by a bell turret.

NEW THEATRE, COVENTRY.—A movement is on foot at Coventry to build a second theatre, to be called the New Grand Theatre of Varieties, on the site of the old Theatre Royal, Smithford-street, the frontage being brought up to the level of the street. The plans for the new building have been prepared by Mr. W. G. Sprague, architect, London.

NEW WESLEYAN SCHOOL CHAPEL, BROADHEATH, ALTRINCHAM.—The memorial stones of the new school chapel at Broadheath were laid recently. The school, it is estimated, will accommodate between five and six hundred scholars. The large room will seat about 350 persons. There will be three class rooms and an infants' room. Behind the platform vestries will be placed. A gallery and three class rooms are arranged for the front of the building, and these will be flanked on each side by the staircase and principal entrance. Rooms for storage, the heating chamber, &c., will be provided in the basement of the building. Externally the front and side elevations will be faced with red stock bricks with terra cotta mouldings, &c. It is proposed to cover the roofs with red Ruabon tiles and the ventilating turret with oak shingling. The floors inside will be of pitchpine, as will also be the screens, gallery front, and roof timbers. The architect is Mr. A. W. Smith, of Manchester, and the principal contractor, Mr. J. E. Dean, of Sale.

NEW POST OFFICE, ABERFELDY, PERTH. — The new post office in Dunkeld-street, Aberfeldy, was opened for public business on the 29th ult. The public office is 18 by 15 ft., the sorting-room 27 ft. 6 in. by 16 ft., and the telegraph-room 16 by 18. The contractors were:—Mason, Mr. John M'Naughton; joiner, Mr. Donald Reid; plasterer, Mr. John Scott; slater, Mr. Alexander Robertson; plumber, Mr. Menzies; architect, Mr. William Bell, C.E.

CATHOLIC CHURCH, HEATON NORRIS, LANCASHIRE.—The foundation stone has just been laid at Heaton Norris of the new St. Mary's Roman Catholic Chapel. The architects are Messrs. Pugin & Pugin, of London, and the builder is Mr. Joseph Briggs, of Heaton Norris. The building will be in the Gothic style, and will accommodate 450 people. It will be 92 ft. 8 in. long from wall to wall, and 40 ft. wide. The cost is estimated at about 4,000*l.*

THE PROPOSED MUNICIPAL BUILDINGS, LLANDUDNO.—A meeting of the Llandudno Urban District Council was held recently to discuss the question of the erection of the proposed municipal buildings. The majority of the members were strongly opposed to spending 14,000*l.*, the original estimate being only 10,000*l.* Mr. T. T. Marks moved, and Mr. Bevan seconded, that a committee of seven be appointed to meet Mr. Silcock, the architect, at an early date, with a view to altering the elevation, using a different kind of stone, and generally reducing the cost, so as not to exceed 12,000*l.* Mr. F. J. Sarson moved an amendment, and it was seconded, that it is not expedient to spend more than 10,000*l.* on municipal buildings. Mr. Marks's resolution was carried.

ADDITIONS TO CATERHAM ASYLUM.—An ordinary meeting of the managers of the Metropolitan Asylum District was held at the County Hall, Spring Gardens, London, on the 27th ult., Sir E. H. Galsworthy, the Chairman of the Board, presiding. The Board accepted the tender of Mr. Solden Hipwell, of Wisbech, to erect for the sum of 5,091*l.* a home for the female attendants at the Caterham Asylum, in accordance with the plans and specifications prepared by Mr. E. T. Hall, architect. The architect's final estimate of the work was 5,000*l.* Plans were approved for the erection of a new pavilion, to contain twenty-eight beds, at the South-Western Hospital, and for the main engineering works required in connexion with the extension works now in course of progress at the Western Hospital. The architect's estimate of the cost of the erection of the pavilion was 5,745*l.*, and of the engineering works 4,000*l.*

ENLARGEMENT OF ST. MATTHEW'S MISSION CHURCH, MONMORE GREEN, WOLVERHAMPTON.—Alterations and additions are now being carried out at the Mission Church, Monmore Green. A chancel is being added to the front of the building, and a new schoolroom provided at the back. The partition-wall that separated the old schoolroom from the mission has been taken away and the two rooms thrown into one. The transformation of the building into a church is being carried out under the supervision of Mr. Lavender, architect, and the contractors are Messrs. Halfpenny Bros., builders.

INFECTIOUS DISEASES HOSPITAL, HAM GREEN, BRISTOL.—The new infectious diseases hospital at Ham Green is approaching completion. The building is being erected from the designs of Mr Yabbicom, City Engineer. The plan provides for four wards and an isolation ward, and each ward is a separate building, with a space of 40 ft. between each. There will be seventeen beds in each of the four wards, while the isolation ward is divided into four apartments with two beds in each. The Ham Green mansion is being fitted up to serve as the head-quarters, with accommodation for the resident doctor and the staff of nurses, attendants, &c. The total cost will be about 27,000*l.* The buildings have been planned with a view to possible extensions. The buildings are of red brick, with freestone dressings.

THE NEW CAMBRIDGE THEATRE OF VARIETIES.—Mr. Deputy Pearce Morrison, Chairman of the Guildhall School of Music, laid the foundation stone, on the 31st ult., of the new building which is to take the place of the old Cambridge Music Hall in Commercial-street, E., destroyed by fire in January of last year. The new hall is to be in the Moorish style, of red brick, with Bath stone dressings, and is designed by Mr. Henry Percival, architect, London, and will accommodate an audience of about 2,500. Every part of the building will be provided with two distinct exits and fire-proof staircases. The pit and stall floor will be about 10 ft. below the level of Commercial-street; the first circle will be about the street level, with a gallery above. The building, which will cost 25,000*l.*, will be supplied with hot-water coils for heating purposes, and will be lighted by electricity.

POLICE-STATION, COVENTRY.—Colonel John Ord Hasted, R.E., Local Government Inspector, recently held an inquiry into the application by the Corporation to borrow 14,571*l.* for new police buildings. Mr. H. Quick, the architect, gave evidence as to the details of the scheme.

LIBRARY, ST. GEORGE, BRISTOL.—Mr. Frank Wills has prepared designs for the new public library for St. George. The structure is to be built of Cattybrook bricks, with Ham Hill stone dressings. The library buildings will have a frontage of about 78 ft., and a depth nearly as great. The building will be heated by hot-water apparatus by Messrs. J. Crispin & Sons, of Bristol. The cost, it is estimated, will be not far short of 6,000*l.* Mr. Frank Cowlin is the contractor.

NAVAL ENGINEERING COLLEGE KEYHAM.—A new south wing has just been added to this college

at an outlay of about 35,000*l.* The contract was given to Messrs. Shellabear & Sons, of Plymouth, who commenced the work in September, 1895. The extension, which has a frontage of 100 ft., and runs back 130 ft., consists of two separate buildings, one for living and sleeping, and the other for instructional work. The new wing will provide for over fifty students, bringing the number at the college up to 250. The architecture of the wing corresponds with that of the main building, but the frontage has a less ornamental appearance. It will be approached by an entrance-hall, with mosaic paving. The staircases throughout will be of English oak. The entrance-hall opens into a recreation-room, 56 ft. by 30 ft. This will be used by the senior students. On the ground floor there are also masters' rooms, a hat and coat room, and accommodation for the attendants. The first and second floors are devoted to cubicles, of which there are fifty-two, the first floor having also a corridor leading to the main building. The educational part of the new wing, known as the "lecture-room building," consists of three floors with class and lecture rooms fitted with galleries, preparation rooms for experiments and demonstrations, and a workshop connected with the existing laboratory. The building will be heated throughout with hot water, and the floors are fireproof. The extra number of students to be provided for in the future has led to the necessity of extending the present dining hall by taking in about 14 ft. at the rear. By this means it will be possible to seat 250 at once. The contract has been carried out under the direction of Major Kenyon, R.E., Superintending Engineer Devonport Dockyard, and Mr. F. W. Kite. Messrs. Shellabear & Sons' principal representatives have been Mr. Shaw and Mr. Giles.

LONDON DOMESTIC MISSION SOCIETY—BELL-STREET MISSION.—This new building has been erected by the Committee of the London Domestic Mission Society to take the place of the Capland-street station. The site has a frontage of upwards of 35 ft. to Bell-street, with a return frontage of 82 ft. to Burne-street. The new building contains four stories—viz., basement, ground, first and second floors. In the basement a large workroom has been provided, in which carpenters' benches, &c., can be used. On the ground floor a large and a small class-room have been arranged in the front building, and the whole of the rear portion has been devoted to the chapel, measuring 50 ft. long by 30 ft. wide. This chapel has an emergency exit to Burne-street, and is lofty and lighted by sky-lights in addition to a range of large windows facing Burne-street. On the first floor are two additional class-rooms and the missionary's private room, and on the second floor a further class-room with three rooms for the caretaker. Externally the building has been faced with picked stock bricks, with red brick dressings, stone cornices, and copings. The works have been executed by Mr. S. J. Scott, of Bloomfield-street, E.C., at a cost of upwards of 3,000*l.* The building has been fitted with electric light throughout, this work being carried out by Messrs. Strode & Co.; Messrs. Edwards & Sons, of Great Marlborough-street, supplying the low pressure hot-water apparatus. The premises were designed by Mr. Howard Chatfeild Clarke, of Bishopsgate-street Within, E.C., and have been carried out under his personal superintendence. The mission was opened on the 31st ult.

CHRIST CHURCH SCHOOLS, WOLVERHAMPTON.—The memorial stone of the new public elementary schools which are being built by the congregation and friends of Christ Church, Wolverhampton, was laid recently. The schools are situate in Leicester-street. They consist of two floors, the lower to be the infants' department, and the upper the mixed department; the former having accommodation for 340 children, and the latter for 290. The architect is Mr. F. Hunter Lines, and the contractor Mr. George Cave. The total cost of the schools (including site, construction, and equipment) will be 3,400*l.*

BANK, HEXHAM-ON-TYNE.—The new branch bank which has been erected in Priestpopple, Hexham, for Messrs. Lambton & Co., of Newcastle-on-Tyne, was opened for business last week. The building, which has a frontage of 70 ft., comprises a banking room, manager's room, large strong cellars, manager's residence, five offices, and a shop. The walls of the ground floor are faced with grey Aberdeen granite in pitch faced blocks, and above are faced with T.L.B. bricks and dressings of Prudham stone. The woodwork, including fittings, of the bank is oak, and the floor mosaic and wood blocks. Messrs. W. & J. Darlington have erected the buildings, with the following sub-contractors: joiner work, Mr. Edward Snowball; painting, Mr. Ellis; plumbing, Mr. J. Smith; bank fittings, Mr. W. C. Tyrie, of Gateshead; special brass and bronze work, Mr. N. F. Ramsey, Newcastle; fireproof floors, Messrs. Mark Fawcett & Co., Westminster; mosaic and wood block floors, Mr. J. F. Ebner, London; granite work and carving, Mr. R. Beall, Newcastle; strong room doors and safe, Messrs. Milner & Co., Liverpool. The whole of the works have been designed by and carried out under the superintendence of Mr. John W. Dyson, of Newcastle, the architect to the bank, and who is now preparing plans for the erection of another branch at Elswick, Newcastle.

SANITARY AND ENGINEERING NEWS.

SEWAGE WORKS, FARSLEY. — Major-General Crozier, R.E., recently conducted a Local Government inquiry at Farsley into an application by the Urban District Council of Farsley for sanction to borrow 14,700*l.* for purposes of sewerage and sewage disposal. Amongst those present were Mr. E. Wade, clerk; Mr. Johnson, C.E. (Johnson & Preston), engineer of the proposed outfall works; and Mr. Benjamin Walker, engineer of the proposed works of sewerage.

PUBLIC IMPROVEMENTS, BRIGHTON.—At a meeting of the Brighton Town Council on the 1st inst. the joint report by the Consulting Engineer (Mr. Lockwood) and the Surveyor (Mr. May) on the protection of the Madeira-road foreshore and the improvements of the road was considered. The report embraced the widening of the road between the site of the Chain Pier and Royal-crescent from 40 ft. to 60 ft., and the provision of two groynes at 10,000*l.*, the timber breast-work required being estimated to cost 2,000*l.* The Council were recommended to adopt the recommendation, and to direct that the Town Clerk should apply to the Local Government Board for sanction to borrow 12,000*l.*, the estimated cost of the work. The proceedings were confirmed after some discussion.

SEWAGE WORKS, STOCKPORT.—Mr. George W. Willcocks, C.E., held a public inquiry on the 1st inst., on behalf of the Local Government Board, in the Court-house, Stockport, as to an application for power to borrow 45,000*l.* in respect of sewage works, 36,079*l.* for gaswork purposes, 7,183*l.* for street improvements, 3,000*l.* for improvement of the public baths, 2,016*l.* for the erection of weights and measures office, and 1,922*l.* for the erection of police parade-room, making a total of 95,000*l.* The Town Clerk (Mr. Walter Hyde) stated that the area of the borough was 2,200 acres, the estimated population 77,600, the annual assessable value 266,617*l.*, and the entire debt of the borough 469,932*l.* including loans under the Public Health Act, therefore non-revenue producing, 232,043*l.* In 1894 they obtained the sanction of the Local Government Board to borrow 95,000*l.* for the construction of a main intercepting sewer and sewage outfall works. There had been paid, 97,376*l.* 11s. 9d.; owing on contracts, 6,524*l.* 1s. 3d.; to be paid for extras and additions, 3,329*l.* 15s. 2d.; total expenditure actually incurred, 107,230*l.* 8d. 2d. The consent of the Local Government Board was now asked for a further expenditure of 27,688*l.* in respect of the sewage works; making a total of 134,918*l.* 8s. 2d. or 39,918*l.* 8s. 2d. more than the original estimate, owing to a large quantity of extra concreting being found necessary, and different parts of the work being extended from time to time. The engineer (Mr. Alfred M. Fowler) detailed the sewage works, explaining that the extra cost was due largely to unexpected difficulties in constructing the sewer. For instance, there was an item of 2,000*l.*, cost of tunnelling under the Cheshire Lines Railway, and heavy charges for extra timbering and concreting, consequent upon coming upon bog and quicksands. A feature peculiar to Stockport was that parts of it were honey-combed with tunnels to supply mills with water taken from the upper reaches of the river Mersey and conveyed through the red sandstone. He did not think the same feature prevailed to the same extent in any other town in the world. To meet these cases, and avoid blocking up the drifts crossing the sewer, flattened iron tubes were used. The mistake made in the Manchester scheme was that of putting in such cases flattened brick sewers, which collapsed, involving serious loss. On the conclusion of the evidence with reference to the sewage scheme, the Inspector went over the ground; the inquiry into the various other matters being adjourned until the 27th inst.

PROPOSED NEW BRIDGE OVER THE RIVER AYR.—It is proposed to erect a new bridge across the river Ayr immediately eastwards of the railway. This bridge will give access to the Agricultural Association's grounds, and also connect a new highway from Whitletts-road, through Craigie lands, with the Holmston-road, by a new roadway formed in the railway company's ground, between Mill-street and Holmston-road. It is intended to have the width of the bridge between the parapets at least 36 ft., and probably 40 ft., and the cost is not expected to exceed 6,000*l.* for the bridge, with its piers, abutments, and roadway, with a further sum of about 1,000*l.* for the approach roads to the bridge from the north and south. The clear width of the river where the bridge is to be erected is 71 yards. The bridge is formed of three spans, each span having four arched steel girders carrying the steel trough flooring and superstructure. There will be an ornamental cast-iron parapet, cornice, and facia. The piers and abutments are to be faced with Ballochmyle stone. The plans have been prepared by Mr. John Eaglesham, C.E., Burgh Surveyor.—*Ayr Observer.*

RESERVOIR, BREEZE HILL, LANCASHIRE.—At the rising of the Liverpool Water Committee on the 30th ult., a visit was made to Breeze Hill to inspect the new service reservoir which has been constructed there by Messrs Holme & King, the contractors. The water engineer, Mr. Joseph Parry, M.Inst.C.E., accompanied the party. The site at Breeze Hill is at an elevation of 145 ft. above sea level, and the population to be supplied is about 80,000, requiring an average daily supply of from two to three million gallons. The works of construction were let to Messrs. Holme & King on July 30th, 1895, the contract sum being 16,661*l.* 7s. 7d. The capacity of the reservoir exceeds six million gallons. The length of the reservoir is 268 ft.; breadth, 240 ft.; and the average depth, 16½ ft. The area at top-water is 7,147 square yards. The arching of the roof consists of seventeen rows of parallel arches, 12 ft. span and 240 ft. long, with thirty-four groined abutment arches, 12 ft. span and 22 ft. long. The arches are covered with soil, which will be grassed, and the top of the reservoir laid out with walks. The walls of the reservoir are composed of concrete, with clay puddled backing, and lined with asphalte. The piers which carry the arches are of brickwork, and the floors of concrete, with a facing of asphalte.

COVENTRY SEWAGE SCHEME.—An inquiry was recently held at St. Mary's Hall, before Colonel John Ord Hasted, R.E., Local Government Inspector, into the application of the Coventry City Council to borrow 156,500*l.* for purposes of sewage disposal. Mr. G. R. Strachan, in partnership with Mr. Mansergh, the engineer in charge of the scheme, gave evidence as to the inadequacy of the present works, and the necessity for new ones. The new scheme proposed to pass through land the whole of the sewage and storm-water — 19,000,000 gallons per day. The pumping works and mains to carry the sewage to the land at Baginton were described. The sewage from the rising mains would first be strained through 2 ft. 6 in. of burnt clay, coke, or gravel before passing on to the land. The subsoil of the farm was sandy gravel, varying in depth from 5 ft. to 14 ft.

FILTER BEDS, CARDIFF CORPORATION WATERWORKS. — The Cardiff Corporation Waterworks Committee have confirmed the acceptance of the tender of Mr. T. D. Ridley, of Cardiff and Middlesbrough, for the extension of the filter beds at the Heath. The engineer (Mr. Priestley) estimated the cost at 10,548*l.* 5s. 4d., and Mr. Ridley's tender was 10,114*l.* 17s. 6d.

LOCAL SEWERS IN LONDON.—The London County Council have sanctioned, subject to a condition recommended by the engineer, the construction of local sewers as follows:—Greenwich—270 ft. of 12 in., and 160 ft. of 9 in. pipe and concrete sewers in Milton-road. Holborn—625 ft. of 12-in. pipe and concrete sewer in John's-mews and John's-place, Little James-street. Newington—200 ft. of 12-in. pipe sewer in Churchyard-row, Newington-butts. St. Giles—140 ft. of 4 ft. by 2 ft. 6 in. brick sewer in Eagle-street, 250 ft. of 4 ft. by 2 ft. 6 in. brick sewer, and 360 ft. of underpinning of sewer in Kingsgate-street, and 115 ft. of underpinning of sewer in Little Queen-street.

STAINED GLASS AND DECORATION.

MEMORIAL WINDOW, WIGGINTON, STAFFORDSHIRE.—The Ven. Archdeacon Scott recently dedicated a window which has been placed in the chancel of Wigginton Church to the memory of the late Mrs. Brown. The window shows three subjects—"The Crucifixion" (centre), "The Nativity," and "The Baptism." The work has been executed by Messrs. Camm & Co., Smethwick.

WINDOW, HEATH TOWN CHURCH, STAFFORDSHIRE.—A stained-glass window has been placed in Heath Town Church in memory of the late Mr. William Pool. It was supplied by Mr. Samuel Evans, West Smethwick.

WINDOW, BLACKBURN CHURCH.—A stained-glass window has been placed in the east end of the Audley Range Congregational Church, Blackburn, in memory of the late Mrs. Eli Heyworth. The window is in the Gothic style, and consists of seven principal lights. It is from the studio of Messrs. Heaton, Butler, & Bayne, of London.

MARBLE TABLET, EVANGELICAL UNION CHURCH, KILMARNOCK.—In Winton-place Evangelical Union Church, Kilmarnock, recently, a marble tablet, by Mossman, of Glasgow, in memory of the Rev. Dr. Morison, was formally inaugurated, together with two stained-glass memorial windows. The windows are the work of Messrs. Ballantine & Gardiner, Edinburgh.

WINDOW, BRAMPTON CHURCH, CUMBERLAND.—The memorial window to the late Rev. H. Whitehead, has been placed in the baptistry at the west end of Brampton Church, and was recently unveiled. On the window are figures representing the prophets Isaiah, Ezekiel, Jeremiah, and Daniel, and the work has been executed by Messrs. Morris & Co. from the designs of Sir Edward Burne-Jones.

ATLAY MONUMENT, HEREFORD CATHEDRAL.—A monument to the late Bishop Atlay has recently been unveiled in Hereford Cathedral. Immediately underneath the Freer memorial window a recumbent effigy, sculptured in white Carrara marble by Mr. Forsyth, of London, is laid upon a cenotaph of cream coloured Belgian marble, with a plinth of Belgian rouge royal marble, and a base or step of Belgian black marble. The effigy is draped in a semblance of modern episcopal robes. The cenotaph is designed in the manner of the thirteenth century, and is shaped into a series of panels with little columns of rouge marble. A mitre appears in relief on the head panel, and a shield presenting the Atlay arms impaled with those of the see on the foot panel, while upon the central panel at the south side an inscription is engraved. The height of the monument is about 4 ft. 6 in. Its cost was about 800*l.*

FOREIGN.

FRANCE.—By order of the Minister of Public Instruction and Fine Arts, the designing and modelling courts of the Ecole des Beaux Arts, the library, and the galleries of this establishment will henceforth be opened to girls and young women between the ages of fifteen and thirty, who will be able to produce (with a certificate of identity), a certificate given by an artist showing that they are qualified to compete for entrance.——From Monday last the Louvre and Luxembourg Museums are to be opened from nine in the morning till five in the evening, the Cluny and Versailles from eleven till five, and the Sèvres and Gobelins manufactories from twelve till five.——The medallion of Alfred Darcel, late Director of the Cluny Museum, has just been placed in one of the halls; it has been modelled by Madame Albazzi.——The "Societe Historique d'Auteuil et de Passy" have opened a subscription to erect on the lawn at Ranelagh, near the Gare de Passy, a monument commemorating the arrival of the Emperor and Empress of Russia. The monument is to be executed by Gustave Michel, sculptor.——The Municipal Council in Paris has just opened a limited competition between the artists Carrierre, Lerolle, Victor Prouvé, and Maurice Elliot, for the decoration of the ceiling of the library of the Municipal Council at the Hôtel de Ville. The judgment will be given at the end of June.——The destruction of the old bridge of Limay is announced. It is well known amongst the landscape painters and archæologists.——The Municipal Council of Paris are endeavouring to preserve part of the church of Saint Pierre de Montmartre, the destruction of which had been decided upon.——An important exhibition of china will be opened on May 15 at the Palais des Beaux Arts in the Champ de Mars.——A national exhibition of industry and fine arts will be held at Rennes on May 2, and kept open three months.——There is a talk of erecting a new Hippodrome, larger and better designed than the old building in the Avenue d'Alma, in the neighbourhood of the Place Clichy, on the site now occupied by the Convent of the Sacré Cœur.

GERMANY.—The Government are considering the advisability of selling the old Botanical Gardens at Berlin for building purposes. The value of the ground is estimated at 800,000*l.*——The Prussian Government is now considering the advisability of extending the Central State Hospital at Berlin, and a Bill has been presented to this effect.——Negotiations are now being carried on energetically as to the entire revision of the Berlin Building Act, and one of the principal points now under discussion is that of the minimum superficial area to be left as courtyards in city property. —— At the Schinkel Celebration, which was held under the auspices of the Architectural Society of Berlin, the Minister of Public Works presented the medals, whilst Herr Zekeli delivered the oration.——A large hospital is to be erected at Lichterfelde, near Berlin.——Professor Reinhold Begas arranged a very unique celebration at his studio on the completion of the national monument, which included the representation of a satirical play, dealing with the art questions of the day, written by the manager of the Court play-house.——The post of City Engineer at Berlin has now been filled by Herr Krause, of Stettin. There were a number of candidates, but his appointment was by 111 votes against 71 for the next candidate. Herr Krause held the post of City Architect at Stettin since 1890.——Westphalia is to have a county hall, and a competition has been held with the view of obtaining a suitable design.——The Town Hall at Munich is to be considerably enlarged at a cost of nearly 200,000*l.* Professor Hauberrisser will be the architect of this addition, as he was also of the original building. The new works will be spread over five years.——We regret to record the death of Professor Wagner, of Darmstadt, who was closely associated with the work of the Technical College of that city for over twenty-eight years.

AUSTRIA.—The Vienna Municipality is at last closing some of the many insanitary basement dwellings which have long been a disgrace to the city.——We notice that the Government scheme of covering in a part of the old River Wien, with the view of running the new Metropolitan Railway on the line of this water-way, has had the approval of the Municipality.——There is to be a monument erected to the Emperor Joseph at Baden, a summer resort close to Vienna.——The Council Chamber of the Houses of Parliament at Vienna is to have a new system of lighting.——The respective Governments of Austria and Germany have now decided on a direct line of telephone between Budapest and Berlin.——The annual Art Exhibition at the Central Society of Artists of Vienna has been opened. This year it is a very small exhibition, only 450 pictures having been hung. There is a small section for sculpture and architecture. The Emperor visited the Exhibition on its opening.——It has practically been decided by the representatives of the Amalgamated Society of Artists of Austria to erect a special art exhibition building, and the site selected is that of the old Franz Josef Barracks. A temporary building is first to be erected, and the Municipality has put the ground at the disposal of the promoters free of charge for the next ten years, after which, however, a ground rent will have to be paid in the event of the larger structure being carried out.

ZURICH.—Four miles distance from Zurich, in a place called Schlieren, extraordinary activity is being displayed in the construction of the works of the North-Eastern Railway and of the gasworks. A new city is rising, in which some thousands of operatives will very shortly take up residence. It is expected that this little town will contribute to prevent the augmentation of the population of Zurich for at least a few years.

MISCELLANEOUS.

PROFESSIONAL AND BUSINESS ANNOUNCEMENTS.—Mr. F. Britton, Builder, has removed from Leconfield-road to 469, Caledonian-road, London, N.

GOOD FRIDAY WEEK.—Next week, in consequence of the Easter holidays, we go to press a day earlier than usual. All communications for the Editor must reach him by *first post on Wednesday* morning, except lists of tenders, which will be received up to 10 a.m. of the same day.

DECORATIVE PANELS, BIRMINGHAM TOWN HALL.—The Estate Committee report the gift, from Mr. Alderman Kenrick, M.P., of four panels, designed and executed by students of the School of Art, for the further decoration of the Town Hall. The titles of the panels and the names of the artists are as follows: "Instrumental Music," by Mr. Sidney H. Meteyard; "Vocal Music," by Mr. Henry A. Payne; "Lench's Trust Almshouses," by Miss Kate E. Bunce; "Dr. Sacheverel," by Mr. Bernard Sleigh.—*Birmingham Post.*

A DISCLAIMER.—Messrs. Grover & Grover, Ltd., of Paxton-road, Tottenham, ask us to state that Henry Grover, builder, of Enfield Highway, is not and has not been at any time connected with their firm.

THE WIDENING OF FLEET-STREET.—On the 30th ult. the Commissioners of Sewers held their usual fortnightly meeting at the Guildhall, Mr. H. G. Smallman in the chair.—Alderman Treloar, with reference to the widening of Fleet-street, moved:—"That it be an instruction to the Finance and Improvement Committee to take the necessary steps to acquire, as speedily as possible, all interests in the properties needed for widening Fleet-street between Bride-lane and Salisbury-court." He said that the cost of this improvement was estimated to be somewhere near 190,000*l.*, of which sum the London County Council had agreed to pay half. When Ludgate Hill was widened by 16 ft. it took thirty years to complete the improvement by the process adopted. The same method was being suggested in the Fleet-street widening, but he thought that a more expeditious mode should be carried out. At present notices were served on freeholders with a view of acquiring their interests, while the leases were allowed to expire by lapse of time. That way of going to work necessarily took a long time, much to the detriment of public interest. His proposal was that the leaseholders as well as freeholders should be bought out at once, so as to complete the improvement in a reasonable time.—After a short discussion the motion was agreed to almost unanimously.

DISCOVERY OF AN ANCIENT DOORWAY IN COLEHILL, TAMWORTH.—In the course of the excavations which are being made at the corner of Church-street and Colehill, for the purpose of erecting new premises for the Tamworth Co-operative Society, the men employed by Mr. E. Williams, the contractor, came across the stone step and jambs of an old doorway. The lintel had disappeared. The doorway faced Colehill, and the step was about 7 ft. or 8 ft. below the present level of the street. The jambs were rudely ornamented.

ANNUAL DINNER, INSTITUTION OF CIVIL ENGINEERS.—The annual dinner of the Institution of Civil Engineers took place on the 31st ult. in the Hall of the Merchant Taylors' Company, Threadneedle-street, Mr. J. Wolfe Barry presiding over a large gathering of members and guests. The usual loyal and patriotic toasts were duly honoured, and the Duke of Teck briefly acknowledged that of "The Prince and Princess of Wales and the other members of the Royal Family." The President next proposed "Her Majesty's Ministers," and Lord G. Hamilton replied. The toast of "The Houses of Lords and Commons" was then given by the President, the Lord Chancellor responding for the Lords, and the Speaker replying for the House of Commons. The President having proposed "Health and Prosperity to the Merchant Taylors' Company," and Major-General Sim having acknowledged the toast, Sir L. Simmons gave the toast of "The Institution." The President, in the course of his reply, remarked that the Institution had on the previous day by a unanimous vote adopted a new departure, and from that time forward admission to the organisation would be gained either by scientific examination or by the submission of some valuable paper or thesis. He thought this new departure would be of very great value to the world at large, as it would be a guarantee that the members and associate members of the Institution had a grounding in that scientific knowledge on which all civil engineering must always be based. It would also be of great value to the Institution as a body by raising it to its proper position, and enabling it to keep pace with those developments of scientific research which were being continually brought to light. The company then separated.

RESTORATION OF THE PENDED TOWER, DUNFERMLINE.—When Mr. Andrew Carnegie visited his native city in the summer of last year, he suggested that the Pended Tower, which at one time formed the connecting building between the Royal Palace and the Abbey, should be repaired and converted into a tower for Dunfermline curios. The suggestion was placed before H.M. Office of Works by a local committee, and the office sanctioned the scheme, and appointed one of its officers, Mr. Hawks, to superintend the work. What remains of the tower is 47 ft. in height, 35 ft. in length from north to south, 16 ft. in breadth at the northern and 18 ft. 6 in. at the southern arch. The lower flat consists of three rooms, and the upper room, or museum proper, is 26 ft. 6 in. from north to south and 13 ft. 6 in. from east to west. The windows in the lower flat have been filled in with cathedral glass, and in the museum the Dunfermline arms and the Scottish Lion are emblazoned on the north and south windows respectively. The floors have been all laid with pavement, and an oak stair leading from the basement to the upper flat has been introduced.—*Glasgow Herald.*

THE SANITARY INSTITUTE.—We have received the annual report of this Institute, in presenting which the Council observe that what is now needed is not so much an awakening of the public as to the necessity for combating preventible diseases, as the imparting of instruction in the best methods to be employed in accomplishing this important task. They have endeavoured to meet this need by developing the educational value of the meetings, lectures, and demonstrations at the Institute, and by improvements in the permanent museum and library, while throughout the country the congresses held by the Institute, and the exhibitions connected with them, are rapidly increasing in importance, and in the influence that they have on matters connected with the wide field of sanitary science. A sketch map, showing the centres to which the work of the Institute has been extended, is given at the end of the report.

APPOINTMENT OF SANITARY INSPECTORS.—The Local Government Board has sanctioned the appointment of Messrs. H. F. Bridel and J. Peers as Sanitary Inspectors in the parishes of Bethnal Green and Islington respectively.

HAMPSTEAD HEATH PROTECTION SOCIETY.—On Wednesday, Mr. E. Brodie Hoare, M.P., presided at a public meeting at the Drill Hall, Hampstead, called for the purpose of forming a society for the protection of Hampstead Heath and the preservation of its natural beauties. Amongst those who have already promised to join the society are the Duke of Westminster, who has consented to become the patron, Sir Walter Besant, Miss Octavia Hill, Messrs. W. B. Richmond, R.A., Norman Shaw, R.A., David Murray, A.R.A., Mr. Samuel Hoare, M.P., seven other members of Parliament, the Bishop of Exeter, &c. The Chairman advocated the desirability of interfering as little as possible with the natural beauty, the natural growth of plants and shrubs, and the natural bird life, on the heath, and also impressed upon those present the necessity of working in harmony with the London County Council.—Mr. E. E. Lake, churchwarden of the parish, moved "That it is desirable to forthwith form a Society for the protection of Hampstead Heath and the protection of its natural beauties." Mr. J. Hardcastle seconded. The Chairman read a letter from the Hampstead Art Society, expressing their sympathy with the object of the meeting. Mr. J. B. Wilkin said that the resolution was "too artistic" for him. He considered that great credit was due to the London County Council for the work they had done in making the heath and Parliament Hill Fields accessible to the public. He contended that the people of Hampstead, or many of them, were selfish, and did not like to see good footpaths, which enabled the people of London to get about the heath freely. The resolution was carried unanimously, and it was afterwards decided to call the Society the Hampstead Heath Protection Society.

ARCHITECTURAL ASSOCIATION SPRING VISITS.—We are obliged to hold over the account of the visit last Saturday, which reached us too late to find space for it.

CAPITAL AND LABOUR.

THE DISPUTE BETWEEN MASTER BUILDERS AND OPERATIVE BRICKLAYERS, WOLVERHAMPTON.—At a meeting held at the Star and Garter Hotel, on March 17, the representatives of the Master Builders' Association met the representatives of the Operative Bricklayers' Society in order to try and come to some amicable arrangement of the points in dispute, and so avert a strike on the part of the bricklayers. We understand that it was decided by the members representing the workmen to accept the terms agreed upon on their behalf. The settlement gives the men an advance of one halfpenny per hour in wages, an hour for dinner during part of the short time in winter (in place of half an hour), half a mile less walking distance, improved conditions as to overtime and lodgings, and also provisions as to giving notice of alteration of rules. The settlement arrived at was laid before the members of the branch on the 24th ult., when they expressed themselves as perfectly satisfied with the settlement arrived at by their representatives. The new rules come into force on the first day of May.—*Midland Counties Express.*

LEGAL.

APPEAL AGAINST A DISTRICT SURVEYOR.

On the 30th ult., the case of Bodley *v.* Marsland, a case of considerable interest to builders, came before Mr. Hopkins at the Lambeth Police-court. It was an appeal under Section 150 of the London Building Act, 1894, by Mr. Bodley, as builder of a proposed building at No. 7, Alleyne-road, Park-road, Camberwell, against an objection made by Mr. Ellis Marsland, the District Surveyor of Camberwell. Mr. Blackwell, barrister, who appeared for the appellant (instructed by Mr. Francis Howse) stated, in opening the case, that on January 28, 1897, Mr. Bodley served upon Mr. Marsland the notice required by Section 145 of the London Building Act, 1894, of intention to make an addition to the premises, 7, Alleyne-road. The effect of the addition, if carried out, would have been to increase the area of the building beyond ten squares and to bring the building within Section 74 (2) of the Building Act. Mr. Marsland refused his consent to the alteration unless the portion of the premises used as a shop was separated from the part used as a dwelling house by fire-proof floors. As the effect of this would have been to involve very considerable expense, it was determined to modify the plan, and instead of building an annexe to the existing premises, to build a separate structure, the new building being, however, separated from the existing one only by about a space of 9 in. Mr. Marsland appeared to have regarded this as an attempt to evade Section 74 and stated that the written notice of objection he had given would apply also to the substituted plan. Accordingly a summons was taken out under Section 150 and the parties appeared before the learned magistrate. Mr. Marsland cross-examined the witnesses to show that as there was a door in the existing building, and it was proposed to put a door in the new building, the two buildings would be united by the openings, and he called attention to Section 77 of the Act, contending that that section supported his view. Mr. Blackwell, in reply, submitted that two buildings could not be united merely by making openings in two walls, unless the two walls were in physical contact with one another. Two houses on opposite sides of a street were not united by the fact that there were doorways precisely opposite to one another. The idea that it could be so could not, he urged, have entered the mind of any man who was not a District Surveyor.

The learned Magistrate adopted this view, and made an order disallowing the District Surveyor's objection to the plans submitted.

*** The foregoing account is furnished to us by the learned counsel for the appellant. Accepting it as a correct statement of the facts, we have no doubt that the judgment of the magistrate is technically correct, and that as the law stands he could not have decided otherwise; but we do not think the case is very creditable to the appellant. It appears to us to be an evasion, through a technicality, of the essential intent of the Building Act. —ED.

A BUILDER AND HIS PLANS:

CASE IN THE COURT OF APPEAL.

The case of Smith *v.* The Chorley Rural District Council came before the Court of Appeal, composed of the Master of the Rolls, and Lords Justices Lopes and Chitty, on the 5th inst., it being an appeal by the plaintiff from a judgment of Mr. Justice Kennedy in an action brought by the plaintiff, a builder at Chorley, for a mandamus to compel the Council to pass the plans of a house in Back-lane, Chorley, which, however, it declined to do on the ground that if the house was built it would make the street 24 ft. wide instead of 36 ft. 6 in., which was the minimum width allowed by the by-laws. The plaintiff's contention was that Back-lane was not a new street. The case was tried before his Lordship and a special jury at the Manchester (resumed) Autumn Assizes, when the jury found that Back-lane was not a new street. His Lordship, however, on further consideration, held that an action for a mandamus would not lie, the proper remedy, if any, being by an application for a prerogative writ of mandamus. He therefore gave judgment for the defendants.

At the conclusion of the arguments of counsel, the Master of the Rolls, in giving judgment, said that the defendants, a local tribunal, which admittedly had jurisdiction to consider whether they would approve or disapprove of certain plans laid before them, entertained that question. The plans were laid before them, not that they might ministerially signify their approval, but that they might say whether in the honest exercise of their jurisdiction they would approve or disapprove of them. It was admitted that the defendants honestly considered the question. The question before them depended upon one fact amongst others—namely, whether the street in question was a new street. They were bound to consider and determine that fact. They decided that it was a new street and they disapproved of the plans. It was impossible to say that they had done anything beyond their jurisdiction. They acted within their jurisdiction in every way. It followed, therefore, that no appeal lay from that decision. The plaintiff brought the present action for a mandamus to compel them to alter their decision and to approve of the plans. Mr. Justice Kennedy had thought it better not to withdraw from the jury the question of whether or no it was a new street, and the jury had found that it was not a new street; but upon further consideration the learned Judge came to the conclusion that there was no question for the jury, and entered judgment for the defendants. In his (the Master of the Rolls) opinion no appeal lay from the decision of the local tribunal acting honestly within their jurisdiction; therefore there was no question for the jury, and the action could not be maintained.

The Lords Justices concurred, and the appeal was accordingly dismissed with costs.

Mr. E. Sutton appeared as counsel for the appellant; and Mr. C. A. Russell, Q.C., and Mr. F. H. Mellor for the respondents.

PIRACY OF AN ARCHITECT'S DRAWINGS.

This case, which was brought by Mr. James Neale, F.R.I.B.A., and a Fellow of the Society of Antiquaries, against Messrs. Harmer & Harley and *Architecture* for publishing some of Mr. Neale's drawings from his work on St. Alban's Abbey, and which was reported in the *Builder* of February 20 last, when Mr. Neale obtained an *interim* injunction against *Architecture*, was again before Mr. Justice Kekewich on the 3rd inst. The defendants decided not to further contest the case, and agreed that Mr. Neale should have a perpetual injunction restraining the defendants, Messrs. Harmer & Harley and *Architecture*, the publishers and proprietors of a paper entitled *Architecture*, from printing, publishing, selling, delivering, or otherwise disposing of any copies of that magazine containing any drawings or plans copied from "The Abbey Church of St. Alban," a work published by the plaintiff and duly registered as copyright; and that the defendants would pay damages and all costs. Mr. Justice Kekewich made an order accordingly.

We understand the costs and damages considerably exceed £200.

MEETINGS.

FRIDAY, APRIL 9.

Institution of Civil Engineers (*Students' Meeting*).—Mr. Harold Berridge on "Poole Harbour." 8 p.m.

SATURDAY, APRIL 10.

Sanitary Institute (*Demonstrations for Sanitary Officers*). — Inspection at the Sewage and Destructor Works, Ealing. 2.30 p.m.

Edinburgh Architectural Association.—(1) Visit to Niddrie Tower. (2) Visit to Duntarvie Castle.

MONDAY, APRIL 12.

Royal Institute of British Architects.—Mr. H. H. Statham on "The New Government Offices Scheme." 8 p.m.

Clerks of Works' Association (Carpenters' Hall).—Fifteenth Annual Meeting. 7.30.

Sanitary Institute (*Lectures for Sanitary Officers*).—Dr. G. Reid on "Sanitary Appliances." 8 p.m.

TUESDAY, APRIL 13.

Institution of Civil Engineers.—Paper to be discussed: "The Blackwall Tunnel," by Messrs. David Hay and Maurice Fitzmaurice. 8. p.m.

WEDNESDAY, APRIL 14.

Liverpool Engineering Society.—(1) Nomination of Council and Officers. (2) Mr. G. Farren on "Silting of Small Harbours and the Effect of a Stream of Water." 8 p.m.

Sanitary Institute (*Demonstrations for Sanitary Officers*).—Inspection of Artisans' Dwellings, Boundary-street area, Bethnal Green. 3 p.m.

THURSDAY, APRIL 15.

Devon and Exeter Architectural Society (*Plymouth, &c., Branch*).—Address by Chairman, Mr. C. King. 7.30p.m.

RECENT PATENTS:

ABSTRACTS OF SPECIFICATIONS.

4,604.—APPLIANCES FOR BURST WATER PIPES: *P. Funck and Another.*—Invention consists in a device for the prevention of damage consequent upon the bursting of water pipes, being the combination of a flap provided with an electrical contact-piece, introduced into the supply-pipe, beyond the main cock, and means for electrically releasing the cock, which is so weighted as then to close automatically, such releasing mechanism being caused to act by an electric current, the circuit of which is completed on the bursting or fracture of a pipe. The releasing mechanism consists of a bent lever, with weight, arranged on the main cock.

4,780.—FLUE OR CHIMNEY: *W. R. Burridge.*—In a flue or chimney, preferably of metal, inventor constructs the shafts in two parts, the upper part of the uptake being fixed, and the lower part of the uptake being free to slide telescopically either within the upper part of the uptake or around the outside of the same. The lower portion of this chimney may be suspended and counterpoised by means of balance-weights, pulleys, and cords.

5,270.—GLUE POTS, &C.: *W. Wilson.*—Inventor forms the glue-pot (or analogous vessel) of an oval or elliptical shape, and provided with the usual water-jacket and handles, the bottom of the glue-pot being sunk or dished at one end to collect the sediment, this sinkage being provided with a grid. Wires or bars are fitted across glue-pot to wipe brush on, and an upright rod is fixed at side to suspend brush from, while a shelf in pot prevents brush dipping too deeply when in use.

9,419.—GRINDSTONES: *F. A. Ziegner.*—Inventor proposes to make grindstones (superior to the natural stones) of the following composition: Washed sand from pits, 60 parts; chloride of magnesium, at 35 deg. Beaumé, 20 parts; magnesite (calcined magnesia), 18 parts; gypsum, 2 parts. This pasty mess is cast in moulds of size and shape desired, and, when dry, taken out.

23,465.—CELLAR FLAPS: *W. Eckstein and Another.*—In order to open and close the large and heavy iron and glass cellar flaps now in use, inventor hinges to each flap a quadrantal rack, passing through a guide-box attached to frame to which flaps are hinged. In this box is a worm which can be operated by a rod, and, by its rotation, the rack and flap connected can be raised or lowered safely.

724.—AUTOMATIC SYPHON FLUSHING TANKS: *W Crapper and Another.*—Object of invention is to ensure the starting of the syphons of automatic flushing tanks directly there is a sufficient head of water therein. For this purpose, in an automatic syphon flushing tank they provide the top of the syphon with a float-operated air valve.

2,304.—WINDOW SASH FASTENER: *J. W. McDougall.*—To secure sash windows, prevent rattling, &c., inventor adopts a fastener consisting of a bolt sliding in a bracket fixed to one sash, and having a pin to engage with a catch upon a bracket on the other sash, and holding the sashes together by a spring.

NEW APPLICATIONS FOR LETTERS PATENT.

MARCH 22.—7,365, W. Wilton, Sliding Sockets for Shop Window Fittings.

MARCH 23.—7,445, W. Farleigh, Fire Grates.—7,493, H. Crane, Floor Drains.—7,495, A. Fleischmann, Door Locks.—7,505, J. Roberts, Window Fasteners.—7,540, H. Junghans, Wood Stain.—7,561, A. Ansell, Casements.—7,575, F. Starace, Windows.

MARCH 24.—7,594, F. Lane, Slewing Crosscut Sawing Machine.

MARCH 25.—7,687, J. Sheppard and F. Dashwood, Construction of Walls, Partitions, and other Structures, and in the form of Bricks or Tiles for the same, and in the manner of setting such and other Bricks or Tiles immediately after Moulding in Hacks for Drying.—7,692 and 7,693, W. Whitehead, Recording and Checking Workmen's Time.—7,694, R. Cunliffe, Window Sash Fasteners.—7,709, W. Oates and J. Green, Connecting Junctions and Bends to Main Drain Pipe.

MARCH 26.—7,808, W. Borrows, Grip Plates for Attaching Hangers, Brackets, or other Attachments to Girders, Rolled Joists, or Beams.—7,830, W. Taylor, Chimney Cowl.

MARCH 27.—7,931, C. Greenhalgh, Waste Water Closets. 7,937, H. Parker, Pedestal Bracket Seats for Water Closets, &c.—7,976, T. Sloan, Machines for the Manufacture of Wood Screws.

PROVISIONAL SPECIFICATIONS ACCEPTED.

11,944, L. Gorisse, Door Checks.—5,245, W. Pretty, Sash Fastener.—5,292, W. Greenwood, Sliding Bolt Fastening for Doors, Windows, &c.—5,482, E. Collier, Securing Door Knobs to their Spindles.—5,692, A. Wakefield, Sanitary and other Pipes.—5,804, W. Boatwright, Chimney Cowl.—5,816, T. Lilley, Fire Hearths.—5,922, T. Moody, Saws.—6,060, A. Rider and E. Russel, Sliding Sash Windows.—6,066, The Wilkinson Sword Company, Limited, Door Locks.—6,113, F. Lynde, Flushing Cisterns.—6,171, L. Hanks, Gully Traps.—6,224, E. Taylor, Sash Fasteners.—6,413, D. and J. Burness, Concrete Paving, &c.—6,567, H. Lake, Moulding Box for forming Plates for Building purposes.—6,577, S. Buck, Ridge and other Tiles.—6,649, D. Campbell, Handles and Spindles of Door Locks.—6,701, J. Peckover, Stone Saws.

COMPLETE SPECIFICATIONS ACCEPTED.

Open to opposition for two months.

6,288, W. Johnson, Sliding Pivoted Window Sashes.—7,606, A. Hocking, Waste or Slop-water Closets.—8,436, T. Pickford, Flat Whitewash and like Brushes.—8,887, J. Rigby, Tiles, Slabs, Wallings, &c.—10,586, J. Simpson, Tiled Hearths or Flooring for domestic Fire-places and other uses.—980, E. Edwards, Surfaces of Walls and Ceilings to receive Plaster without Laths, &c.—1,725, J. Watson, Sash Fastener.

SOME RECENT SALES OF PROPERTY:

ESTATE EXCHANGE REPORT.

March 23.—By WILKINSON, SON, & WELCH (at Brighton).

Brighton.—30, Old Steyne, f.	£1,820

March 24.—By DOUGLAS YOUNG & CO.

Norwood.—33 to 43 (odd), Palace-rd., f., r. 176*l.*	2,110
Ilford.—Balfour-rd., "Philorth," f., r. 36*l.*	525
Granville-rd, "Lindhurst," f., r. 36*l.*	520
3 and 5, Thorold-rd., f., r. 48*l.*	740
Wandsworth.—51, Gorst-rd., u.t. 84 yrs., g.r. 6*l.* 10s., e.r. 38*l.*	310
Balham.—Tunley-rd., "Elbury," f., r. 39*l.*	545

By W. MOREY & SONS (at Bridport)

Bradpole, Dorset.—"Gore House," f., r. 20*l.*	300

March 25.—By J. BAKER & SON.

Hampstead.—14, Birchington-rd., u.t. 69 yrs., g.r. 10*l.* 10s., e.r. 85*l.*	780

By HORTON LEDGER.

Pentonville.—16, Holford-sq., u.t. 35 yrs., g.r. 5*l.*, r. 58*l.*	660
Barnsbury.—30, Matilda-st., u.t. 47¾ yrs., g.r. 5*l.*, r. 34*l.*	415

By W. STEVENS.

Brixton.—28, 30, and 32, Hargwyne-st., u.t. 67½ yrs., g.r. 15*l.* 10s., r. 117*l.*	885
Kingsland.—1, Shellgrove-rd., u.t. 75¾ yrs., g.r. 5*l.* 10s., r. 30*l.*	290

By STIMSON & SONS.

City of London.—6, 8, and 10, Moorgate-st., u.t. 19¼ yrs., g.r. 513*l.* 3s. 9d., r. 3,367*l.* 5s.	22,100
Southwark.—9, Southwark-st., f., e.r. 500*l.*	6,500
Pimlico.—176, Cambridge-st., u.t. 35 yrs., g.r. 8*l.*, e.r. 60*l.*	470
Battersea.—102 to 112 (even), Lavender-rd., u.t. 39 yrs., g.r. 27*l.*, r. 149*l.* 10s.	940
81 and 83, Blondel-st., u.t. 78½ yrs., g.r. 8*l.*	360
82, Bridge-rd., u.t. 52¾ yrs., g.r. 5*l.* 10s., r. 42*l.*	490
Camberwell.—Lilford-rd., &c., i.g.r. 44*l.*, u.t 14 yrs., g.r. 27*l.* 18s.	120

By FAREBROTHER, ELLIS, & CO.

Plaxtol, Kent.—"The Golding Hop" b.-h. and 9 a. 2 r. 13 p., f., r. 92*l.*	1,440

By C. C. & T. MOORE.

Mile End.—28, Dunk-st., f., r. 41*l.* 12s.	530
Poplar.—8 to 14, Stewart's-rd., u.t. 51¼ yrs., g.r 28*l.*	260
37 and 38, Rook-st., f., r. 31*l.* 4s.	240

By J. A. & W. THARP.

Poplar.—106 and 108, Chrisp-st., u.t. 55 yrs., g.r. 1*l.*, r. 77*l.*	1,075

COMPETITION, CONTRACTS, AND PUBLIC APPOINTMENTS.

COMPETITION.

Nature of Work.	By whom Advertised.	Premiums.	Designs to be delivered.
*Plans for Board Rooms, &c. adjoining Workhouse	Ormskirk Union	20l. 1st.; 15l. 2nd.; 10l. 3rd.	No date

CONTRACTS.

Nature of Work or Materials	By whom Required.	Forms of Tender, &c. Supplied by	Tenders to be delivered.
*Extension of Electric Light Buildings	Bath Corporation	F. H. Moger, 3, Wood-st. Bath	April 12
Road Works, Hardy-street, &c.	Blackburn Corp.	W. Stubbs, C.E. Municipal Offices, Blackburn	do.
Street Works, Cardington-road, &c.	Bedford U.S.A.	Boro' Surv. Town Hall	April 13
Enclosing Burial Grounds, Carrowmanty, &c.	Sligo Union	N. Parke, Board Room, Sligo	do.
Four Houses, Granville-street, Liversedge, Yorks	.....	W. Lister, 20, Halifax-road, Dewsbury	do.
House, Sandy, Beds.	.....	E. Twelvetrees, Archt. Sandy	do.
Additions to Schools, Llangattock, Crickhowell	.....	F. Baldwin, Archt. 8, Lion-street, Brecon	do.
*Roadmaking and Paving Works	Willesden D.C.	O. C. Robson, Dyne-road, Kilburn, N.W.	do.
*Construction of Sewers, &c.	East Stow R.D.C.	Taylor, Son, & Santo Crimp, 27, Gt. George-street, S.W.	April 14
*Provision and Erection of Band Stand	Kettering U.D.C.	T. R. Smith, Market-pl. Kettering	do.
Farm Buildings, Thwing, Yorks	.....	H. & F. Piercy, The Elms, Lowthorpe	do.
Enlarging Chapel, Trevena, Tintagel, Cornwall	.....	Wise & Wise, Archt. Launceston	do.
Alterations, &c. Business Premises, Garnet-street, Middlesbro'	.....	W. G. Roberts, Archt. 61, Albert-road, Middlesbro'	do.
Schoolhouse, Riverstown, Ireland	.....	Rev. A. Quinn, Riverstown	do.
Sewerage Works	Atherton(Lincs)U.D.C.	D. Schofield, Council Offices	do.
Police Station, Stretford	Manchester Corp.	H. Littler, Archt. 21, Pitt-street, Preston	do.
Laundry Buildings, &c.	Wakefield Union	W. Watson, Archt. Barstow-square, Wakefield	do.
Sewerage Works	Newmarket U.D.C.	J. W. Metcalf, Town Hall	do.
Workhouse Infirmary	Redruth Union	S. Hill, Archt. Redruth	do.
Drains, near Great Yarmouth	Caister-on-Sea Parish Council	J. E. Teasdel, Engr. 3, Queen-st. Gt. Yarmouth	April 15
Rebuilding St. David's Church, Gyfeillon, Llanwonno, S. Wales	.....	E. M. B. Vaughan, Archt. Cardiff	do.
Baptist Church, Redditch	.....	J. Wills, Archt. Victoria-chambers, Derby	do.
Two Semi-detached Villas, Manningham, Bradford	.....	T. C. Hope, Archt. Old Bank-chmbrs, Bradford	do.
Tower and Spire, Stranorlar, Ireland	.....	W. H. Byrne, Archt. 20, Suffolk-street, Dublin	do.
*Making, Levelling, Paving, &c. Roads	Kingston-on-Thames Corp.	Boro' Surv Clattern House, Kingston	do.
Six Houses, Wortley-road, Masborough Yorks	Mrs. E. Robinson	J. Axleby, Archt. Wilton-lane, Masborough	April 16
Quay Wall	Ayr Harbour Trust	H. V. Eaglesham, C.E. 61, Sandgate, Ayr	do.

CONTRACTS—*Continued.*

Nature of Work or Materials.	By whom Required.	Forms of Tender, &c. Supplied by	Tenders to be delivered
Granite and slag	Grimsby R.D.C.	J. Wintringham, St. Mary's Chmbrs. Gt. Grimsby	April 16
Additions to Business Premises, Swindon	Kingshill Co.-op. Soc.	Sec. Beulah House, Victoria-rd. Swindon	April 17
Laboratory at Science and Art Schools, Redruth	.....	S. Hill, Archt. Redruth	April 19
Hospital, roads, &c. Tredington	Tewkesbury R.D.C.	J. Villar, Archt. 1a, Cambray, Cheltenham	April 20
Pipe-laying (1,200 yds.)	Barnstaple Water Co.	F. W. Chanter, Engr. Bridge Chmbs. Barnstaple	do.
Stone Bridge over Camp Beck, Walton	Cumberland C.C.	County Surv. The Courts, Carliale	do.
Surveyor's Materials	Branksome (Dorset) U.D.C.	S. J. Newman, Surveyor, Council Offices	do.
*Taking-up Old and Laying New Sewer	St. Martin-in-the-Fields Vestry	C. Mason, Town Hall, Charing Cross, W.C.	do.
*Painting and Distempering	St. George-in-the-East Vestry	G. A. Wilson, Vestry Hall, Cable-street, E.	do.
Alterations to Meltham Mills, near Huddersfield	.....	J. Kirk & Sons, Archt. Huddersfield	April 22
Sanitary Work, &c. at Workhouse	Mallow Union	M. Regan, Union Offices, Mallow	April 23
Street Works, Littlefield Estate	Grimsby T.C.	A. E. Skill, C.E. 7, Macaulay-ter. Grimsby	do.
House, Stanley-road, Wakefield	.....	W. Wrigley, Archt. 10, Wood-street, Wakefield	do.
*Underground Sludge Tank at Sewage Works	Walthamstow U.D.C.	G. W. Holmes, Town Hall	do.
Schools, Llangollen	County School Govnrs.	H. Feather, Archt. Queen-street, Cardiff	April 26
Schools, West End, Sowerby Bridge, Yorks	.....	S. Wilkinson, Archt. Sowerby Bridge	April 27
*Swimming and Slipper Baths	Tunbridge Wells Corp.	Boro' Surv. Town Hall	April 28
*Steam Warming Apparatus	Met. Asylums Board	A. & C. Harston, 15, Leadenhall-street, E.C.	do.
*Concrete and Stone Bridge, Road, &c.	Leicester Corp.	E. G. Mawbey, Town Hall	April 30
*Covered Service Reservoir	Yeovil Corporation	Borough Surveyor	do.
*Prison and Police Barracks, Cairo	Egyptian Government	Service Administratif Offices, Cairo	May 3
*Alterations, &c. to Infirmary, New Chapel, &c. &c.	East Ashfort (Kent) Union	Workhouse, Willesboro'	May 7
*Asylum, Hendon	Central London Sick Asylum Board	Giles Gough & Trollope, 28, Craven-street, Strand	May 10
*Iron Structures at Asylum	LondonCountyCouncil Asylums Committee	The Clerk, 21, Whitehall-place, S.W.	do.
*Warehouse and Six Cottages, Kirton Lindsey	.....	Eyre & Southall, Gainsboro'	No date

PUBLIC APPOINTMENTS.

Nature of Appointment.	By whom Advertised.	Salary.	Applications to be in.
*Surveyor's Assistant	Smethwick U.D.C.	100l. per annum	April 12
*Clerk of Works	Surbiton U.D.C.	3l. per week	April 13
*Surveyor's General Assistant	Rugby U.D.C.	120l. per annum	April 14
*Clerk of Works	Manchester Corp.	.....	April 20
*Inspector of Nuisances	Brentford U.D.C.	100l. per annum	do.
*Stock Clerk	Oxford Corp.	80l. inc. to 120l. per ann.	April 23
*District Road Surveyor	Wigmore R.D.C.	120l. per annum	April 26

Those marked with an asterisk (*) are advertised in this Number. *Competitions. p. iv.* *Contracts, pp. iv. vi. viii. & xxi* *Public Appointments, pp. xviii. & xxi.*

Leytonstone.—16 to 26 (even), Lower Temple-st., and l.g.r. 7l. 5s., u.t. 970 yrs., g.r. 12l. £305
By NEWBON, EDWARDS, & SHEPHARD.
Barbican. — Whitecross-st., "The Bricklayers' Arms" p.-h., a freehold rental of 100l., for 43 yrs. 2,560
Barnsbury.—Barnsbury Pk., f.g.r. 12l., reversion in 12 yrs. 1,630
Barnsbury Pk., Two Peppercorn g.r., reversion in 12 yrs. 1,160
Upper Park-st., Two Peppercorn g.r., reversion in 12 yrs. 710
Kentish Town.—76 and 78, Highgate-rd.; also "The Woodman" b.-h., f., r. 140l. 2,560
Chalk Farm.—Chalk Farm-rd., &c., f.g.r. 26l., reversion in 20 yrs. 1,060
Chalk Farm-rd., f.g.r. 13l., reversion in 28 yrs. 570
Tottenham Court-rd.—9, Pitt-st., f., r. 42l. 700
Barnsbury.—7 and 8, Matilda-st., u.t. 43¾ yrs., g.r. 9l. 9s., r. 72l 12s. 580
9 and 10, Matilda-st., u.t. 44¼ yrs., g.r. 10l. 10s. 800
By WYATT & SON (at Chichester).
Chichester, Sussex.—49, West-st., f., r. 42l. 620
39, 41 and 42, Westgate, f., r. 21l. 560
6 and 7, High-st., f., r. 18l. 18s. 225
Bosham, Sussex.—Three freehold cottages, r. 20l. 10s. 210
By BILL & SON (at Birmingham).
Barrow-in-Furness, Lancs. — "The Royalty Theatre" and Hotel, f. £11,000
By H. HENDRIKS (at Birmingham).
Yardley, Worcester.—King's-rd., "Perseverance Villa," area 1,250 yds., f. 950
Birmingham, Warwicks.—186 to 196 (even), Bordesley Green, and six houses in rear, u.t. 78¾ yrs., g.r. 25l. 750
86 to 96 (even), Devonshire-st., u.t. 80 yrs., g.r. 15l. 350
March 26.—By HOBSON, RICHARDS, & Co.
Anerley.—Melvin-rd., f.g.r. 12l., reversion in 81 yrs. 301
Croydon.—Clarence-rd., f.g.r., 5l. 10s., reversion in 89 yrs. 151
By GREEN & SON.
Upper East Smithfield.—No. 44, area 3,695 ft., f. 3,400
A corner building site (formerly Nos. 59 and 60), area 2,390 ft., f. 940
By FURBER, PRICE, & FURBER.
Shepherd's Bush.—14 and 16, Willow Vale, f., r. 50l. 16s. 525
18 and 20, Willow Vale, u.t. 48½ yrs., g.r. 5l. .. 270
Marylebone.—21, Manchester-st., u.t. 13 yrs., g.r. 30l. 450
By GRANT, WHIELDON, & Co.
Kensington.—99, Sinclair-rd., u.t. 82 yrs., g.r. 15l., r. 65l. 550
Methwold, Norfolk.—"Ivy Cottage" and 2 a., f. 140
By A. J. SHEFFIELD.
Bethnal Green.—3 to 31 (odd), Jersey-st., f., r. 380l. 18s. 2,675
Spitalfields.—10, Corbet's-court, u.t. 90 yrs., g.r. 15l. 525
By J. A. EGGAR (at Farnham).
Farnham, Surrey.—85, 86, and 87, West-st.; also three cottages adjoining, f. 1,530

The Hatches "Hay Mead," and 7 a. 1 r. 35 p., f. and c. £410
The Bourne, "Fir Grove," and 8 a. 1 r. 22 p., f. 640
Frensham, Surrey.—Batt's Corner, enclosure of coppice, 6 a. 2 r. 31 p., f. 110
Dockenfield, &c., four cottages and 6 a. 3 r. 9 p., f. 590
Crondall, Hants.—Three cottages and 1 a. 3 r. 19 p., f. 150
"Trigg's Farm," 29 a. 1 r. 36 p., f. 650
By HORNE, SON, & EVERSFIELD (at Sydenham).
Sydenham.—De Frene-rd., "Ennismore," u.t. 86½ yrs., g.r. 10l., e.r. 50l. 355
March 29.—By FIELD & SONS.
Blackfriars.—49, 51, and 53, Surrey-row, area 12,000 ft., f. 7,100
Lewisham.—Davenport-rd., "Davenport," f. 1,310
Walworth.—24 and 26, Mann-st., u.t. 54¼ yrs., g.r. 6l. 565
Bermondsey.—68 and 70, Beatrice-rd., u.t. 36¼ yrs., g.r. 7l. 500
Walworth.—40, Deacon-st., u.t. 45¾ yrs., g.r. 5l., r. 40l. 345
Clapham.—108, Abbeville-rd. North, u.t. 83 yrs., g.r. 7l., r. 38l. 355
By ELLIOTT, SON, & BOYTON.
Anerley.—183 to 197 (odd), Croydon-rd., u.t. 60 yrs., g.r. 48l., e.r. 379l. 2,520
Norwood.—20, 22, and 24, Portland-rd., f., r. 145l. 2,180
March 30.—By RICHARDSON & BARTON.
Harrow.—Spencer-rd., "Durlesdon" and "Rosslyn," f., r. 60l. 795
By S. CLIFFORD TEE.
Holborn.—55, Red Lion-st., f., r. 65l. 1,535
Buckhurst Hill.—1 to 4, Norfolk-cottages, f., e.r. 77l. 18s. 800
By MARLER & Co.
Kensington.—17 and 19, Harrington-rd., and 8, Glendower-place, "The Glendower Hotel," u.t. 18¾ yrs., r. 520l., with goodwill, furniture, &c. 3,500
By T. B. WESTACOTT.
Stamford Hill.—6, East Bank, u.t. 88½ yrs., g.r. 9l., e.r. 65l. 690
By WESTON & SONS.
Brixton.—141, 143, and 143a, Stockwell Park-rd., u.t. 40½, 44¾, and 45¾ yrs., g.r. 27l. 15s., r. 150l. 1,200
68 to 76 (even), Railton-rd., u.t. 75¼ yrs., g.r. 30l., r. 280l. 2,910
Kennington.—9 and 11, Stannary-st., f., r. 52l. .. 775
By WOODS & SNELLING.
Spitalfields.—75, 77, and 79, Pelham-st., u.t. 66 yrs., g.r. 60l., e.r. 250l. 5s. 1,410
1, 2, and 3, Pelham-buildings, u.t. 66 yrs., g.r. 12l. 300
Stoke Newington.—108 to 114 (even), Boleyn-rd., u.t. 83 yrs., g.r. 68l. 2,100
Sidcup.—High View-rd., "Greta," f., r. 70l. 1,075
1, 2, and 9 to 14, Stanley-rd., f. 1,385
3 to 8, Stanley-rd., u.t. 85 yrs., g.r. 9l. 790
By H. ROW.
Clapham.—Macaulay-rd., "Macaulay House," u.t. 73¼ yrs., g.r. 14l., r. 70l. 920
20, Lavender-hill, u.t. 68 yrs., g.r. 10l., r. 63l. .. 1,160

Peckham.—165, Rye-lane, u.t. 67½ yrs., g.r. 10l., r. 75l. £1,230
Chelsea.—596 and 598, King's-rd., u.t. 51 yrs., g.r. 14l., r. 106l. 1,560
564, 568 to 576 (even), King's-rd., u.t. 55 yrs., g.r. 27l. 13s. 4d., r. 273l. 3,460
8 and 10, Radnor-st., u.t. 44 yrs., g.r. 12l., r. 66l. 16s. 705
38, Sydney-st., u.t. 30 yrs., g.r. 6l., r. 63l. 590
143, Sydney-st., u.t. 6 yrs., g.r. nil, r. 48l. 117
23, Upper Manor-st., u.t. 49½ yrs., g.r. 10s. 295
31 and 33, Whitehead's-grove, u.t. 12¼ yrs., g.r. 21l. 245
24 to 30 (even), Cadogan-st., u.t. 3¾ yrs., g.r. 18l. r. 180l. 205
Pimlico.—198, Ebury-st., u.t. 4 yrs., g.r. 7l., r. 65l. 130
Chelsea.—80 to 86 (even), Keppel-st., u.t. 12 yrs., g.r. 21l. 320
Peckham.—Peckham Park-rd., i.g.r. 42l. 10s., u.t. 18¼ yrs., g.r. 35l. 105
By A. PHILLIPS.
Hampstead.—34, 36, 50, and 52, Mazenod-av., u.t. 98½ yrs., g.r. 50l. 8s., r. 364l. 2,245
Kilburn.—33, Willesden-lane, u.t. 86 yrs., g.r. 16l. r. 65l. 630
Fulham.—Effie-rd., f.g.r., 40l. 10s., reversion in 73½ yrs. 1,105
By ORGILL, MARKS, & ORGILL (at Mason's Hall Tavern).
Pall Mall.—Whitcomb-st., "The Blackamoor's Head," p.-h., f., with goodwill 19,050
Wandsworth.—Dashwood-road, "The Bolingbroke," p.-h., and goodwill, with shop and house adjoining, f. 20,000
By W. ROLFE (at Mason's Hall Tavern).
Forest Hill.—Stanstead-rd., "Swiss Cottage" Tavern, and a plot of land, u.t. 35 yrs., r. 150l., with goodwill 16,000
Oxford-st.—Gray-st., "The Carpenter's Arms" p.-h., u.t. 26¼ yrs., r. 100l., with goodwill 4,660
By BOYTON & PEGRAM (at Walham Green).
Walham Green.—24, Dawes-rd., f., e.r. 45l. 540
By JENKINS & SONS (at New Cross).
New Cross.—65, 67, 69, 71, and 73, Florence-rd., u.t. 51 yrs., g.r. 15l. 10s., r. 140l. 1,450
75 and 77, Florence-rd., u.t. 52 yrs., g.r. 6l. 8s., r. 56l. 645
54, Shardeloes-rd., u.t. 68 yrs. g.r. 5l., e.r. 36l. .. 365
Brockley.—102, Manor-rd., u.t. 69 yrs., g.r. 7l. 10s., e.r. 48l. 410
139, Manor-rd., u.t. 70 yrs., g.r. 6l. 345
By LANGRIDGE & FREEMAN (at Tonbridge).
Tonbridge, Kent.—16 and 18, Priory-st., f. 350
8, 10, and 12, Uridge-rd., and a plot of land, f. .. 680

Contractions used in these lists.—F.g.r. for freehold ground-rent; l.g.r. for leasehold ground-rent; i.g.r. for improved ground-rent; g.r. for ground-rent; r. for rent; f. for freehold; c. for copyhold; l. for leasehold; e.r. for estimated rental; u.t. for unexpired term; p.a. for per annum; yrs. for years; st. for street; rd. for road; sq. for square; pl. for place; ter. for terrace; cres. for crescent yd. for yard, &c.

PRICES CURRENT OF MATERIALS.

TIMBER.		
Greenheart, B.G.	ton	£ s. d. / £ s. d.
Teak, E.I.	load	11 10 0 / 16 10 0
Sequoia, U.S.ft.cu.		1/8 / 1/10
Ash, Canada load		3 5 0 / 4 10 0
Birch, do.		3 15 0 / 5 10 0
Elm, do.		4 0 0 / 5 5 0
Fir, Dantsic, &c..		2 15 0 / 4 15 0
Oak, do.		2 10 0 / 3 10 0
Canada		5 5 0 / 6 10 0
Pine, Canada red		0 0 0 / 0 0 0
Do. Yellow		1 15 0 / 3 15 0
Lath, Dantsic, fath		4 10 0 / 5 10 0
St. Petersburg		5 0 0 / 6 10 0
Wainscot, Riga, &c., log		2 0 0 / 4 5 0
Odessa, crown		2 0 0 / 4 5 0
Deals, Finland and 1st std 100		9 0 0 / 9 10 0
Do. 4th & 3rd		9 0 0 / 9 10 0
Do. Riga		7 10 0 / 8 10 0
St. Petersburg, 1st yellow		11 0 0 / 13 10 0
Do. 2nd yellow		10 0 0 / 11 0 0
Do. white		9 10 0 / 11 10 0
Swedish		9 0 0 / 16 10 0
White Sea		10 10 0 / 17 0 0
Canada, Pine 1st		20 0 0 / 23 0 0
Do. do. 2nd		14 10 0 / 16 10 0
Do. do. 3rd, &c.		7 0 0 / 10 10 0
Do. Spruce, 1st.		9 10 0 / 11 0 0
Do. do. 3rd and 2nd		7 15 0 / 9 0 0
New Brunswick		7 10 0 / 8 0 0
Battens, all kinds		5 0 0 / 20 0 0
Flooring boards, sq., 1 in. prep. 1st		0 9 0 / 0 16 0
Do. 2nd		0 7 6 / 0 12 6
Other qualities—		0 5 9 / 0 7 0
Cedar, Cuba, ft.		1/4 / 1/5
Honduras, &c.		1/4 / 1/5
Mahogany, Cuba		1/5 / 1/6½
St. Domingo, cargo av.		1/4½ / 2/8
Mexican, do. do.		1/4 / 1/5
Tobasco, do. do.		1/5 / 1/7
Honduras, do.		1/5 / 1/6½
Box, Turkey, ton		4 0 0 / 15 0 0
Rose, Rio		7 0 0 / 14 0 0
Bahia		8 0 0 / 12 0 0
Satin, St. Doming.		0 0 9 / 0 1 0

TIMBER *(continued)*.		
Satin, Porto Rico		0 0 7 / 0 1 6
Walnut, Italian		0 0 8 / 0 0 7
METALS.		
Iron—Pig, in Scotland	ton	2 4 9½ / 0 0 0
Bar, Welsh, in London		5 15 0 / 5 17 6
Do. do. at works in Wales		5 10 0 / 5 12 6
Do. Staffordshire, in London		5 15 0 / 6 10 0
COPPER—British cake and ingot		52 5 0 / 52 15 0
Best selected		52 15 0 / 53 15 0
Sheets, strong		58 0 0 / 59 0 0
Chili bars		49 2 6 / 0 0 0
YELLOW MTL. lb.		4/15-16 / 5/1-16
LEAD—Pig, Spanish	ton	11 16 3 / 11 17 6
English com. brands		11 17 6 / 12 2 0
Sheet, English 6 lbs. per sq. ft. and upwards		13 2 6 / 0 0 0
Pipe		13 12 6 / 0 0 0
ZINC—English sheet	ton	20 10 0 / 0 0 0
Vieille Montagne		11 10 0 / 0 0 0
Spelter		17 5 0 / 0 0 0
TIN—Straits		59 15 0 / 0 0 0
Australian		61 5 0 / 61 15 0
English Ingots		63 10 0 / 64 0 0
Banca		61 0 0 / 0 0 0
Billiton		59 15 0 / 60 0 0
OILS.		
Linseed	ton	14 5 0 / 0 0 0
Cocoanut, Cochin		27 15 0 / 0 0 0
Do. Ceylon		24 0 0 / 0 0 0
Palm, Lagos		24 10 0 / 0 0 0
Rapeseed, English pale		27 10 0 / 27 15 0
Do. Brown		27 0 0 / 27 10 0
Cottonseed ref.		15 17 6 / 16 10 0
Oleine		18 10 0 / 19 10 0
Lubricating U.S.		0 6 3 / 0 7 6
Do. black		0 4 9 / 0 6 6
TAR—Stockholm	barrel	1 2 0 / 0 0 0
Archangel		0 12 6 / 0 0 0
Turpentine	ton	20 12 6 / 20 15 0

TENDERS.

Next week communications for insertion under this heading must reach us *not later than 10 a.m.* on Wednesday, as, owing to the advent of Good Friday, we go to press a day earlier than usual.

ABERBEEG (Mon.).—For rebuilding "Hanbury Arms" Hotel, for Messrs. J. R. and T. A. Webb. Messrs. Swash & Bain, architects, 3, Friars-chambers, Newport, Mon. Quantities by architects:

A. E. Parfitt	£6,576	E. Mainwaring	£5,913
N. Bagley	6,531	C. Lock	5,825
Williams & Thomas	6,190	W. A. Linton	5,820
Powell & Mansfield	6,154	C. F. Morgan	5,697
Lawson & Co.	6,130	D. Lewis	5,633
Turner & Sons	6,018	Horton & Co.	5,480

ABERDEEN (N.B.).—Accepted for the erection of hospital, Alford, for Alford District Committee, Aberdeen County Council. Messrs. James Duncan & Son, architects, Turriff:—

Masonry.—Alex. Grant, Alford	£467 10
Carpentry.—A. & W. Hendry, Wartle	270 0
Slating.—S. & W. Christie, Dyce	82 10
Plastering.—R. Moir, Inverurie	61 0
Plumbing.—T. Laing & Sons, Inverurie	92 15
Painting.—Fraser, Hutton, & Co., Insch	29 0
Total	£1,002 15

ABERTILLERY (Mon.).—For the erection of Intermediate schools, Abertillery. Messrs. Swash & Bain, architects, Newport. Quantities by architects:—

Turner & Sons,	£2,288
D. Lewis, Llanhilleth, Mon. (accepted)	2,267

BATLEY (Yorks).—Accepted for levelling, paving, flagging, &c., St. James-street, for the Town Council. Mr. O. J. Kirby, Borough Surveyor, Market-place, Batley:—

J. Akeroyd & Son, Birstal, near Leeds	£236 9 7

BRADFORD.—For the erection of a house, stable, &c., Barker-end-road. Mr. G. C. Gamble, architect, Parkinson's Chambers, Market-street, Bradford:—

Masonry.—Wm. Totty & Sons	£400
Joinery.—W. Kellett	
Slating.—T. Nelson	
Plumbing.—Gell & Firth	
Plastering.—M. Bland	

[All of Bradford]

BRADFORD.—For the erection of four through houses, Laisterdyke. Mr. G. C. Gamble, architect, Parkinson's Chambers, Market-street, Bradford:—

Masonry.—J. Rushworth, Cayton	£968 16
Joinery.—J. Schofield, Laisterdyke	
Slating.—Hill & Nelson, Bradford	
Plumbing.—M. Slinger, Bradford	
Plastering.—D. Hamsworth, Fagley, Bradford	
Painting.—L. Sunderland, Great Horton, Bradford	

BOURNE END (Bucks).—For additions and alterations to the Platt, Bourne End, for Mr. F. C. Frye. Mr. Arthur Vernon, architect, 29, Cockspur-street, London, S.W.:—

Cox	£825	Lovell	£774
Silver	782	Gibson, High Wycombe*	724 10

* Accepted.

BRIDLINGTON QUAY (Yorks).—Accepted for draining, kerbing, &c., Richmond-street, for Mr. W. Battle. Mr. J. Earnshaw, architect, Wellington-road, Bridlington Quay:—

B. Robinson, Hull	£530

BROMHAM (Bedfordshire).—For the erection of farm buildings, for Mr. W. H. Allen. Mr. George P. Allen, architect, 26, Great Ormonde-street, W.C.:—

S. Foster, Kempston	£270

BURNLEY.—Accepted for the construction of a reservoir and other works, for the Corporation. Messrs. G. H. Hill & Sons, engineers, Albert Chambers, Albert-square, Manchester:—

W. Underwood & Bros., Dukinfield	£7,871

BURNLEY.—Accepted for the supply of 2,500 tons of limestone, and 500 tons of granite, for the Rural District Council. Mr. S. Edmondson, surveyor, 18, Nicholas-street, Burnley:—

	s.	d.
R. Briggs & Sons, Clitheroe	3	3
Holgate Marsden, Salterforth	3	7
P. W. Spencer, Cononley	0	0
Brundritt & Co., Runcorn	10	5
L. Cooper, Leeds	8	6

CATERHAM.—For the erection of a nurse's home at Imbecile Asylum, for the Metropolitan Asylums Board. Mr. E. T. Hall, Architect, 57, Moorgate-street, E.C.:—

Foster & Dicksee	£6,384	Kemp & Co.	£5,596
Leslie & Co., Ltd.	6,126	Marriage & Co.	5,593
Mulled & Co.	5,946	S. Hipwell, Wisbech*	5,091
	5,656		

* Accepted.

COVENTRY.—For house, shops, &c., Stoney Stanton-road, Coventry, for Mr. Jesse Holliday. Messrs. Harrison & Hattrell, architects. Quantities by Mr. J. M. Binley, Coventry:—

C. Haywood, Jun.	£1,044 11	R. Wootton	£888 0 0
C. H. Barber	1,010 0 0	T. G. Golby*	873 0 0
G. Storer	937 13 6		

* Accepted.

[All of Coventry.]

CRICCIETH.—Accepted for timber groyne, &c. Messrs. Thomas Roberts & Son, engineers:—

John & Hunter, Pwllheli	£578

DOVER.—For the erection of a car shed, Maxton, for the Town Council. Mr. H. E. Stilgoe, C.E., Town-hall, Dover:—

G. F. Keeler	£1,180 8	G. Munro, Dover*	£1,020 0
W. H. Grigg	1,039 0		

* Accepted.

[Engineer's estimate, £1,050.]

DUDLEY.—For building the "Station Hotel" stable buildings and premises at Dudley, for the Wolverhampton and Dudley Breweries, Limited. Mr. J. D. Wood, architect, Birmingham. Quantities supplied by the architect:—

Brooks & Tandy	£4,850	G. Cave	£4,298
J. Mallin	4,600	Lowe & Sons	4,193
Guest & Sons	4,465	A. Lynex	4,191
C. A. Horton	4,399	Harley & Son, Smethwick*	4,190
Welb & Round	4,350		
Willcock & Co.	4,310		

* Accepted.

EAST HAM.—For the making of three new roads and sewers on land abutting on the Barking-road, for Mr. E. E. Croucher. Mr. T. W. Moore, surveyor, 76, Chancery-lane, W.C.:—

John Jackson	£1,989	Jesse Jackson	£1,760
Thos. Adams	1,938	John Burrill	1,600
Geo. Bell	1,772	H. Payne (accepted)	1,590

EGHAM.—For erecting an iron gymnasium hall, for Messrs. Morton & Vicars, "Scaithife," Egham. Mr. R. J. Worley, architect, 50, Lincoln's-inn Fields:—

Killer & Co., Harlesden	£293 17

EPSOM.—For the erection of laundry buildings, &c., at the workhouse, for the Union Guardians. Mr. H. D. Searles-Wood, architect, 157, Wool Exchange. Quantities by Mr. Francis Miller:—

Balchin & Shopland	£3,727	P. tter	£3,134
A. Dashwood	3,593	Thomas & Edge	3,035
W. B. Pearce	3,450	E. J. Burnand	3,024
H. Brown	3,190	J. R. Burrage	2,987

EXMOUTH.—For the restoration of St. John-in-the-Wilderness Church, for the vicar and churchwardens. Messrs. Kerley & Ellis, architects, Exmouth. Quantities by architects:—

Lacey	£715 0 0	Grace	£684 18 4
Dart	697 10 0	Gibson	633 0 0
Luscombe & Son	690 0 0		

FOLESHILL.—For 320 yards of new streets, Edgwick, Foleshill, Coventry, for Messrs. Peach Bros. Messrs. Harrison & Hattrell, architects, Coventry. Quantities by Mr. J. M. Binley, Coventry:—

R. Wootton	£1,456 0 0	R. Brant	£787 17 4
John Holme	1,157 0 0	T. G. Golby	712 0 0
Kelley & Son	1,043 0 0	Mason, Leicester*	678 10 4
E. Orton	733 0 0		

* Accepted.

GLOUCESTER.—For the execution of sewage works, Wotton St. Mary Without, Barnwood, and Hucclecote, for the Rural District Council. Mr. J. F. Trew, C.E., County-chambers, Gloucester:—

Sanders & Co.	£5,551 3 6	W. L. Meredith, Gloucester*	£4,341 0 0
Hy. Roberts	4,823 11 10		
Stephen Ambrose	4 698 2 9		

* Accepted.

GOOLE.—For the erection of four shop fronts, Boothferry-road, for Mr. T. C. Turton. Mr. H. B. Thorp, architect, Goole. Quantities by the architect:—

H. Kelsey & Sons	£433 0	Jackson Bros., Goole*	£399 10

* Accepted.

GOOLE.—For alterations to Nos. 11 and 13, Gladstone-terrace, for Messrs. E. & T. Clark. Mr. H. B. Thorp, architect Goole. Quantities by the architect:—

H. Kelsey & Sons	£383	Jackson Bros., Goole*	£350
W. Featherstone	360		

* Accepted.

GREAT YARMOUTH.—For the erection of two houses, Gorleston, for Mr. F. Gray. Mr. H. Dudley Arnott, architect, High-street, Gorleston:—

Carter & Wright	£2 160
Thos. Howes, Great Yarmouth (accepted)	2,095

HAMPTON WICK.—For repairs to Lansdowne House, for the Urban District Council. Mr. J. Nixon Horsfield, surveyor, Hampton Wick:—

Arthur	£317 9	Brown	£165 0
Thompson	249 0	Whenman	159 0
Dashwood & Sons	248 12	J. J. Richards	157 15
Rayner & Winkworth	189 0	A. C. Wells, 8, Costerton-terrace, Teddington*	129 0
Wm. Rice	181 10		

* Accepted.

HUDDERSFIELD.—For the erection of a bottling store, for Messrs. Peter Marsland & Sons. Mr. J. Berry, architect, 9, Queen-street, Huddersfield:—

Excavating, Masonry, and Bricklaying.—Mark Brook, Leeds-road	£1,225
Plumbing and Glazing.—Geo. Garton, Market-place	
Plastering.—M. Milnes, Moldgreen	
Painting.—Sam Kendall, Pyram-street	

IRTHLINGBOROUGH.—For the erection of a villa residence, for Mr. W. J. Shortland. Mr. H. Adnitt, architect, High-street, Rushden:—

A. Trayner	£1,475 0	Hacksey Bros.	1,355 0
T. Wilmott, jun.	1,459 10	Geo. Henson	1,350 0
Whittington & Tomlin	1,424 0	W. Coates & Son	1,309 0
T. & C. Berrill	1,411 0	F. Henson	1,285 0
R. Marriott	1,410 0	Freeman & Son	1,276 0
Abbott	1,405 0		

KINSALE (Ireland).—For additions to workhouse, for the Union Guardians. Mr. R. Evans, C.E., 53, South Mall, Cork:—

Kelly Bros., Kinsale, co. Cork	£285

LONDON.—Accepted for the construction of a sewer, Bromley-road, Catford, for the Lewisham Board of Works:—

Wm. Woodham, 3, Holmshaw-road, Lower Sydenham, S.E.	£4,861

LONDON.—For erecting shaft and additions to premises, Old Ford-road, for Messrs. Kidd & Co.:—

	£	Extra for Glazed Bricks. £
Foster & Dicksee	3,643	660
Higgs & Hill	3,615	648
Colls & Son	3,557	694
Patman & Fotheringham	3,471	685
C. Cox	3,467	600
Holland & Hannen	3,425	683
Ashby & Horner	3,259	572
C. Yates & Co., Bow*	3,023	679

* Accepted.

LONDON.—Accepted for an iron workshop for the Kensington Institute for Blind:—

Killer & Co.	£173

LONDON.—For extension to the Eton Laundry, Shepherd's Bush, London. Messrs. Johnstone Bros., architects and surveyors, Carlisle:—

G. Lyford	£2,822	L. L. Leeder & Co., 102, High-road, Chiswick*	£2,473
Wm. Brown	2,570		

* Accepted.

LONDON.—Accepted for new shop-front, York-road, Wandsworth. Messrs. Morley & Letts, surveyors, 185, Earl's Court-road, S.W.:—

H. S. Lee	£227 19 9

LONDON.—For decorative works at "Westlands," West Hill-road, Wandsworth. Messrs. Morley & Letts, surveyors, 185, Earl's Court-road, S.W.:—

Chamberlain	£399 5 6	Barber & Bellamy, Putney*	£315 0 0
H. S. Lee	365 0 0		
J. Whitaker	354 0 0		

* Accepted.

LONDON.—For electric-lighting and decorative works at No. 14, Nevern-square, Kensington, S.W. Messrs. Morley & Letts, surveyors, 185, Earl's Court-road, S.W.:—

Rugg & Son	£350 8	J. Whitaker	£313 0
H. Smith & Son	343 5	F. Holdstock, Earl's Court (accepted)	299 0
Simmonds Bros.	321 0		

LONDON.—Accepted for new sanitary systems and sundry substantial and decorative repairs, at Nos. 11, 17, 19, and 21, Gunterstone-road, Kensington, W. Messrs. Morley & Letts, surveyors, 185, Earl's Court-road, S.W.:—

F. Holdstock	£345

LONDON.—For painting and repairing the pagoda on the island in Victoria Park, for the London County Council:—

J. Crossley	£221 11 8	Unsigned	£148 0 0
J. Kybett	198 19 8	Chapman & Sturton	137 13 7
G. McArthur	157 9 0	Marchant & Hirst	136 10 10

* Accepted.

LONDON.—For new Science School at the Woolwich Polytechnic, Lower Market-street, Woolwich. Mr. Henry H. Church, architect, Woolwich. Quantities by Mr. Walter Whincop, Stoke Newington and Woolwich:—

Holliday & Greenwood	£5,995	Chessum & Sons	£5,300
E. Proctor	5,630	Battley, Sons, & Holness	5,192
H. L. Holloway	5,572	J. Chapman	4,975
Thomas & Edge	5,483	J. B. Sanford	4,875
Lorden & Son	5,300	Munday & Sons (accepted)	4,521

LONDON.—For the erection of stabling and factory, Westwood House, Goose Green, S.E., for Messrs. Batey & Co., Limited. Mr. F. A. Powell, architect, 344, Kennington-road, S.E.:—

W. Smith	£4,554	Wm. Hammond	£4,132
W. Smith	4,450	Turtle & Appleton	4,070
Holliday & Greenwood	4,364	Peacock Bros.*	3,970
H. Burman & Sons	4,250		

* Accepted.

EAST GRINSTEAD.—For alterations to "The Dormans Park Hotel," East Grinstead, for Messrs. Letheby & Christopher. Mr. John H. May, architect, 254, High Holborn, W.C. Quantities by the architect:—

Young	£1,174	Johnson & Co.	£1,106
Longley & Sons	1,163	Wall & Co., London*	1,016
Sobey	1,148		

* Accepted.

LONDON.—For the erection of a block of flats and shops in Richmond-road, West Kensington Park, W. Messrs. Booth & Fox, architects:—

J. Christie, Uxbridge-road Station	£2,200

[No competition.]

LONDON.—For alterations to the "Golden Cross" public-house, Lancaster-road, Notting Hill, for Messrs. Helliwell & Ginder. Mr. John H. May, architect, 254, High Holborn, W.C. Quantities by the architect:—

Sobey	£1,245 0	Ansell	£1,190 0
Sealey	1,225 0	Wall & Co.	1,185 0
Courtney & Fairbairn	1,207 0	Ransom & Co.*	1,147 10

* Accepted.

NEWPORT.—Accepted for rebuilding business premises, Commercial-street, for Mr. J. C. Sims. Messrs. Swash & Bain, architects, Newport:—

D. W. Richards, Newport	£735

NEWBRIDGE.—Accepted for erecting a Congregational church. Messrs. Swash & Bain, architects, Newport:—

C. F. Morgan, Newbridge	£1,950

PARSONSTOWN (Ireland).—For the erection of a residence, Kinnitty, for the Union Guardians. Mr. Jas. Kennedy, C.E., Boardroom, Workhouse, Parsonstown:—

J. Stone	£900	D. P. Hoctor, Parsonstown*	£850

* Accepted.

RUSHDEN.—For the erection of house, Griffith-street, Rushden, for Mr. W. Penness. Mr. H. Adnitt, architect, High-street, Rushden:—

T. Swindall	£713 0	T. & C. Berrill, Irchester*	£647 0
H. Sparrow	685 0		
T. Wilmott	662 10	R. Marriott	645 0
Whittington & Tomlin	651 0	F. Henson	640 0

* Accepted.

SANDBACH.—For the erection of a shop, The Hill, for the Industrial Co-operative Society. Mr. Alfred Price, architect, Elworth:—

J. Leicester	£829 15	J. Shinger, Sandbach*	£744 0

* Accepted.

[Architect's estimate, £705.]

SEISDON (Staffordshire).—Accepted for additions to the Bratch Infectious Hospital, for the Seisdon Rural District Council. Mr. T. A. Lowry, architect, Wolverhampton. Quantities by the architect:—

Messrs. T. & G. Perry, Wolverhampton	£305

SOUTH MOOR (co. Durham).—Accepted for the erection of miners' lodge. Mr. J. W. Thompson, architect, Collingwood-street, Newcastle-on-Tyne. Quantities by architect:—

J. W. Bolam, Pelton, Chester-le-Street	£2,327

SOUTH MOOR.—For erecting St. George's Church, South Moor, Mr. J. W. Thompson, architect, Newcastle:—

Masonry.—Alf. Routledge, Stanley, co. Durham	£1,592
Joinery.—Henry Mcle, Stanley, co. Durham	572

STACKSTEADS.—Accepted for erecting an iron school and class rooms for the Baptist Church, Stacksteads, near Bacup, Lancashire:—

Killer & Co., Harlesden, N.W.	£388

WIMBLEDON.—For the erection of billiard-room at "Tijuca," The Downs, Wimbledon. Mr. Robert J. Thomson, architect, 64, Hill-road, Wimbledon:—

Bulled & Co.	£569	G. Berry*	£448
Whitehead Bros.	525		

* Accepted.

WOLVERHAMPTON.—For new premises, Lichfield-street, Wolverhampton. Mr. T. A. Lowry, architect. Quantities by the architect:—

George Cave	£3,140	F. Lindsay Jones, Wolverhampton*	£2,746
Willcock & Co.	3,080	Philip Bowater	2,668
Henry Gough	3,075		
Bradney & Lloyd	3,018		

* Accepted.

THOMAS-STREET.—Supplying and fixing the fittings, for the London School Board :—

Articles.	H. Bouneau.	T. Cruwys.	G. M. Hammer & Co.*	Illingworth, Ingham & Co.	J. H. W. Martin.	T. J. Syer & Co.
	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.
3 Working Tables .....each	12 0 0	11 5 0	11 15 0	13 10 0	20 5 0	15 5 0
1 Working Bench	25 0 0	29 5 0	20 0 0	22 12 0	29 0 0	24 0 0
Set 30 Lockers with shelves	43 0 0	34 0 0	38 0 0	44 3 0	55 5 0	47 10 0
Set 38 Lockers complete	40 0 0	38 0 0	29 10 0	32 8 9	46 0 0	46 18 0
Totals.....	144 0 0	135 0 0	122 15 0	139 13 9	191 0 0	164 3 0

LONDON SCHOOL BOARD TENDERS.

At the meeting of the London School Board on Thursday, the Works Committee brought up the following lists of tenders :—

BRENTWOOD INDUSTRIAL SCHOOL.—Exterior painting and interior cleaning :—

S. H. Corfield	£308 0	J. T. Robey*	£290 0
Hammond & Son	399 5		

* Accepted.

DIVISIONAL OFFICES (Richard-street).—Interior painting :—

T. Nicholson	£135 0 0	R. E. Clarke	£105 0 0
F. Newton	124 5 7	Stevens Bros.	104 0 0
G. S. S. Williams & Son	114 0 0	Marchant & Hirst	99 10 0
W. Irwin	113 10 0	Staines & Son	89 0 0
		H. Eady (accepted)	79 0 0

COLLINGWOOD-STREET.—Sanitary work, &c. :—

W. Downs	£1,310	W. & H. Castle	£1,200
Dove Bros.	1,295	Johnson & Co.	1,162
Stevens Bros.	1,230	Staines & Son	1,157
E. Lawrance & Sons	1,211	E. Triggs*	1,110

RHYL-STREET.—Heating apparatus :—

Maguire & Gatchell, Ltd.	£746 10	J. C. & J. S. Ellis, Ltd.	£595 0
Rosser & Russell, Ltd.	665 0	W. G. Cannon & Sons	524 0
Comyn, Ching, & Co.	658 10	J. F. Clarke & Sons	494 0
H. C. Price Lea & Co.	655 0	G. Davis*	448 0
J. Metcalf	605 0		

ST. ANDREW'S-STREET.—Erecting manual training centre and laundry centre over :—

		Extra for brickwork in cement.
W. Downs	£1,519	£35 0
J. & C. Bowyer	1,327	33 0
J. Smith & Sons	1,308	27 0
W. Akers & Co.	1,294	30 0
Holloway Bros.	1,255	28 0
Lathey Bros.	1,229	26 0
J. F. Ford	1,193	29 0
J. Garrett & Son	1,170	27 0
E. Triggs*	1,160	33 10

SUPPLY OF SLOW COMBUSTION STOVES :—

Carron Co.	£0 14 5	Hope Foundry Co.	£0 14 10
O'Brien, Thomas & Co.	1 5 6	McDowall, Stevens, & Co.	0 18 0
G. Wright & Co.	1 2 6	Ashton & Green	1 7 5
Falkirk Iron Company	0 18 9	G. Portway & Son	1 4 6
Hope Foundry Co.	1 6 3	British Foundry Co.	0 14 3
Do. do.	0 17 1	Coalbrookdale Co.	1 14 0

* Accept tenders of the Hope Foundry Co. and the Carron Co.

WALNUT TREE WALK.—Rebuilding brick casing to flank walls, &c. :—

J. Marsland	£108 0	G. Brittain	£80 0
H. J. Williams	94 10	W. V. Goad*	68 0

WEST-SQUARE.—Erecting upper standard rooms, &c. :—

		Extra for brickwork in cement.
Johnson & Co.	£2,660 19	£59 13
C. Cox	2,637 0	45 0
W. Downs	2,450 0	40 0
J. & M. Patrick	2,428 0	50 0
E. P. Bulled & Co.	2,392 0	50 0
Holliday & Greenwood	2,335 0	45 0
G. E. Wallis & Sons	2,327 10	35 0
J. Longley & Co.	2,278 0	45 0
J. & C. Bowyer	2,247 0	49 0
Lathey Bros.	2,228 0	39 0
J. Smith & Sons*	2,202 0	45 0

SUPPLY OF TRAY-CUPBOARDS, on a running contract:—

E. Spencer & Co.	each	£11 0 0
G. M. Hammer & Co.	,,	7 10 0
Illingworth, Ingham, & Co.	,,	6 17 6
Rice & Son	,,	6 16 0
H. Bouneau	,,	5 18 0
J. Garvie & Sons	,,	5 17 10
H. Addison & Co.*	,,	5 0 0

WESTVILLE-ROAD. — Erecting manual training centre, laundry centre, &c. :—

		Extra amount required for building brickwork in cement.
J. & M. Patrick	£2,228 0	£30 0
D. Charteris	1,946 0	35 0
R. A. Yerbury & Sons	1,927 0	32 0
G. S. S. Williams & Son	1,899 0	37 0
Lathey Bros.	1,813 0	29 0
E. Triggs	1,767 10	42 5
E. T. Folley	1,737 0	40 0
F. G. Minter	1,714 0	36 0
J. Garrett & Son*	1,698 0	29 0

* Recommended for acceptance.

TO CORRESPONDENTS.

J. L., O. B. P. (amounts should have been stated.)

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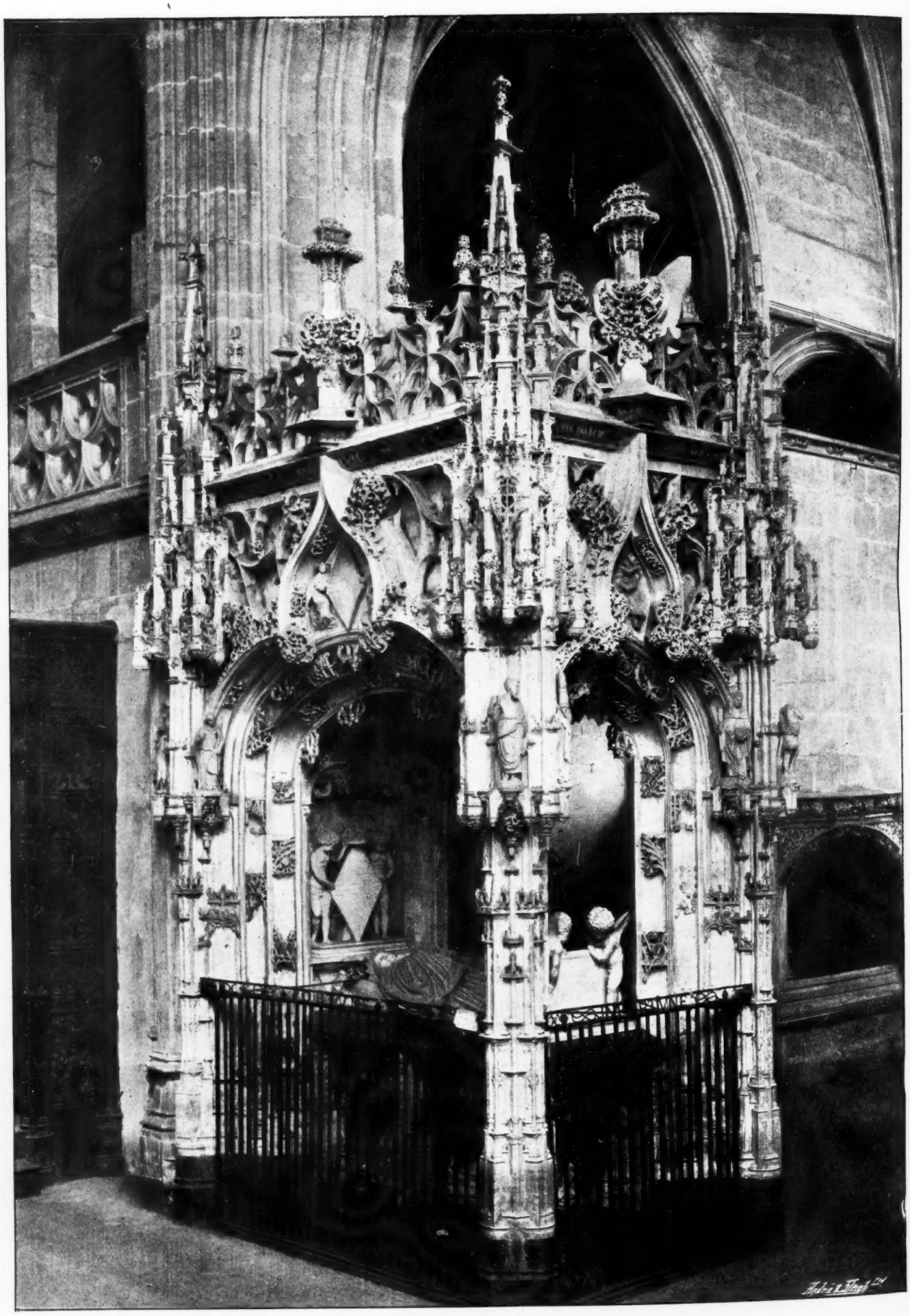

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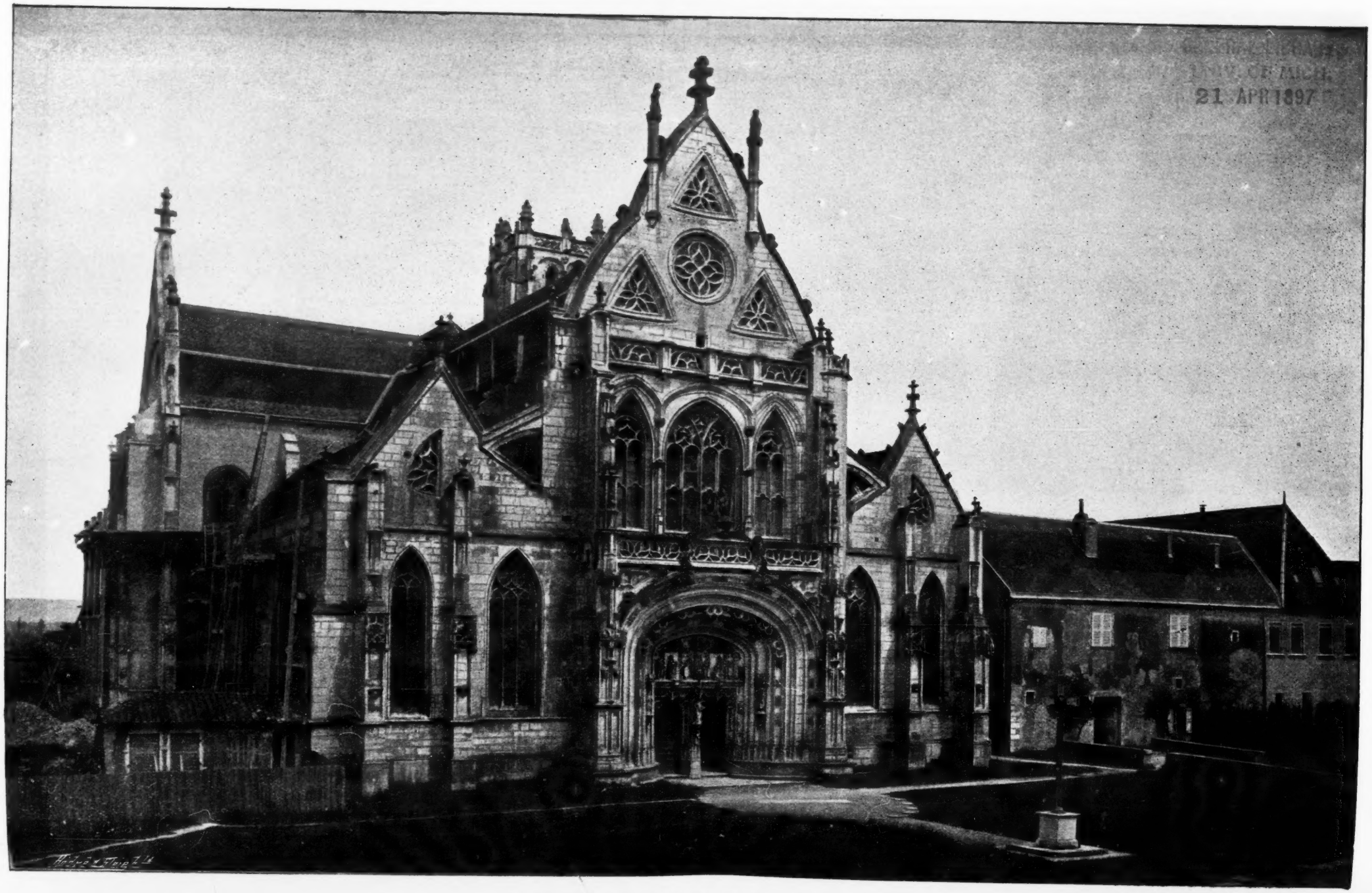

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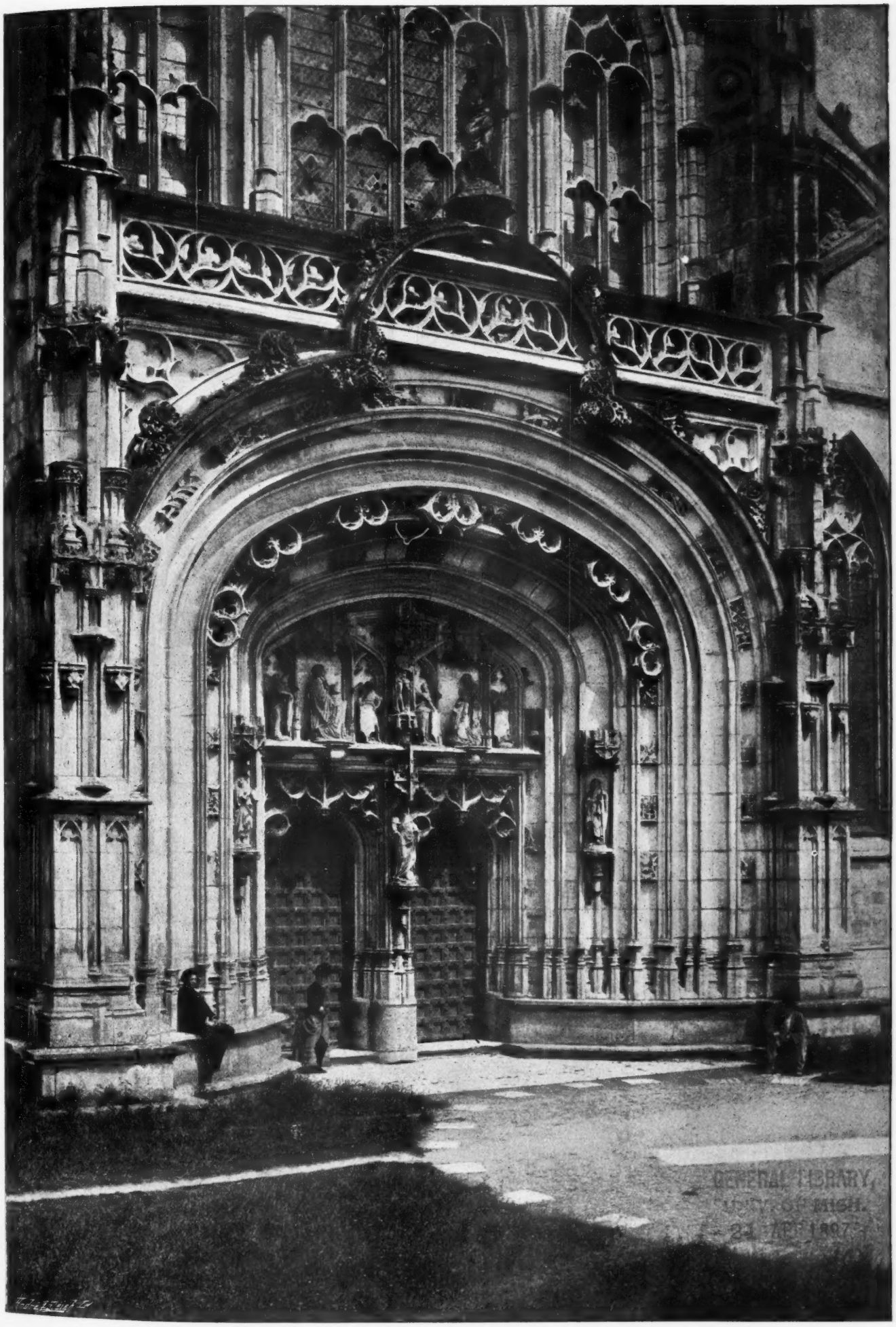

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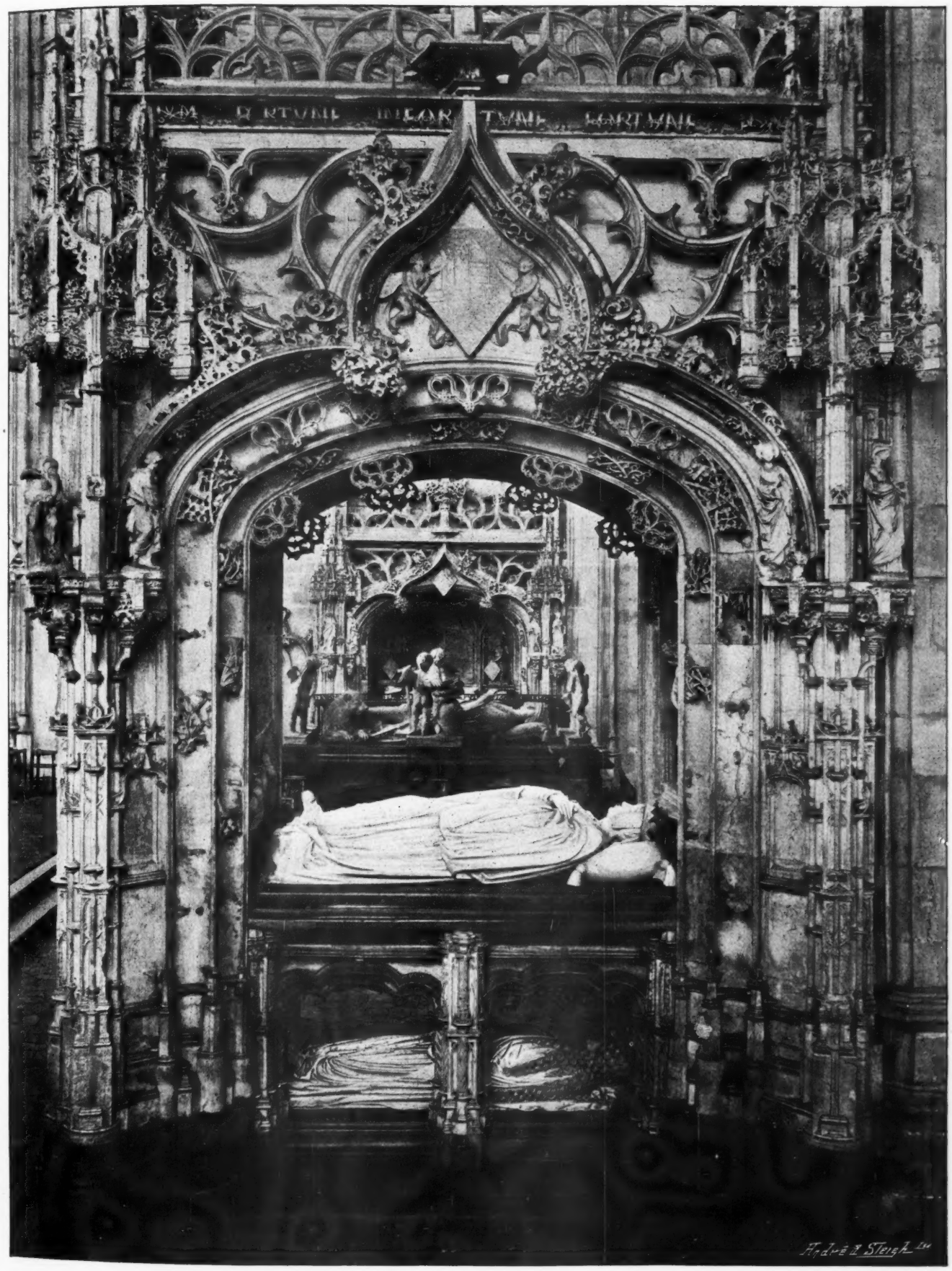

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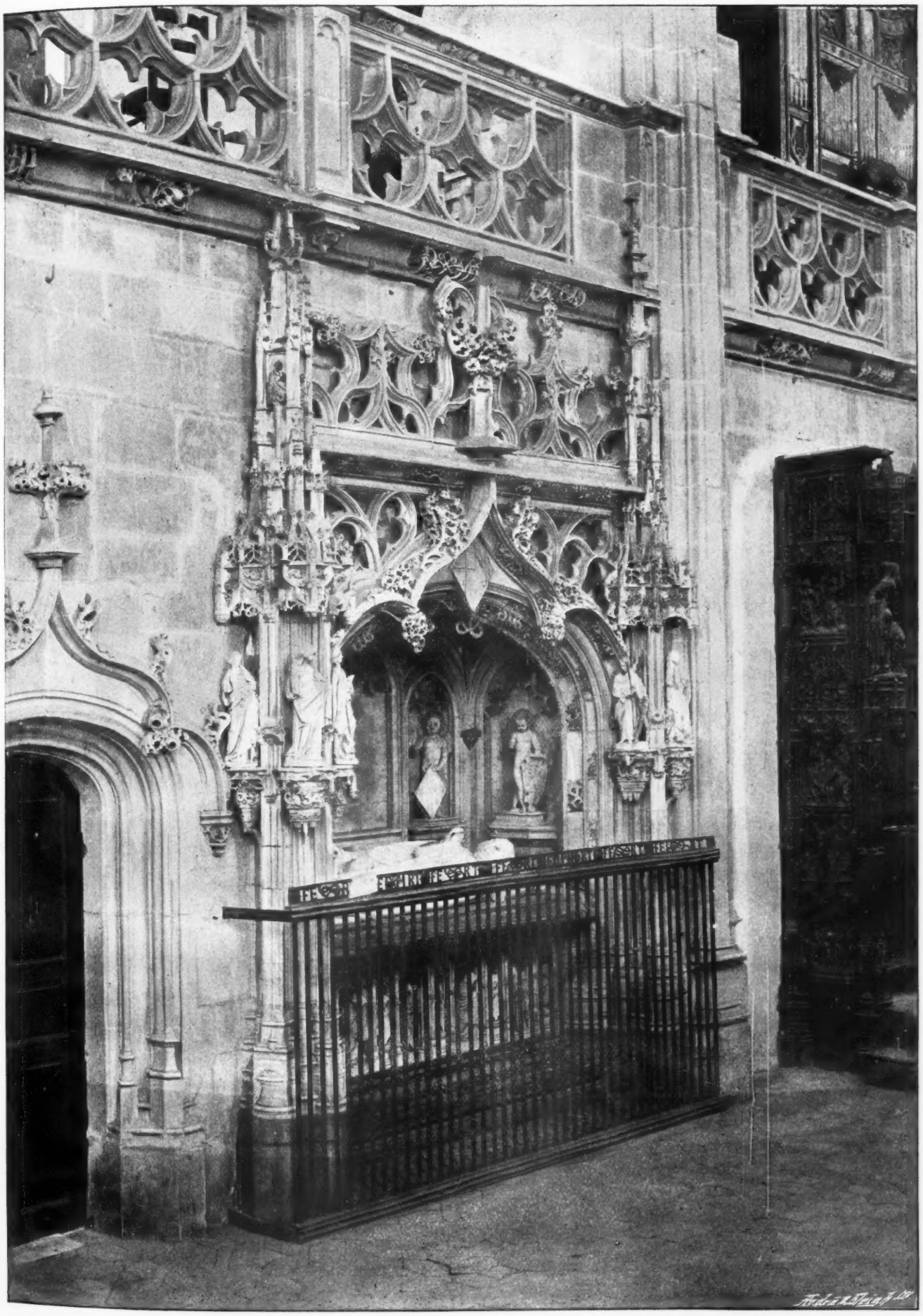

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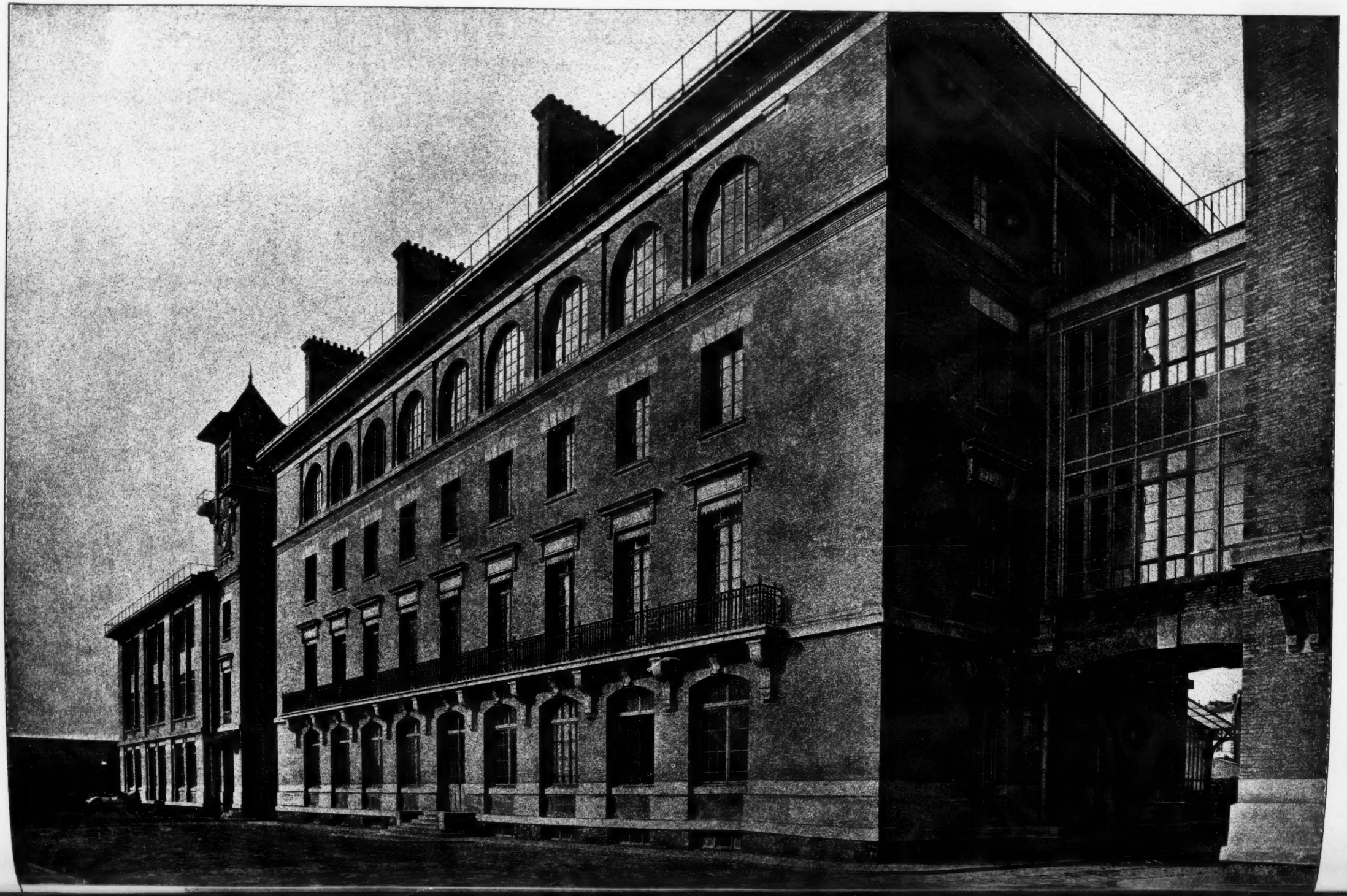

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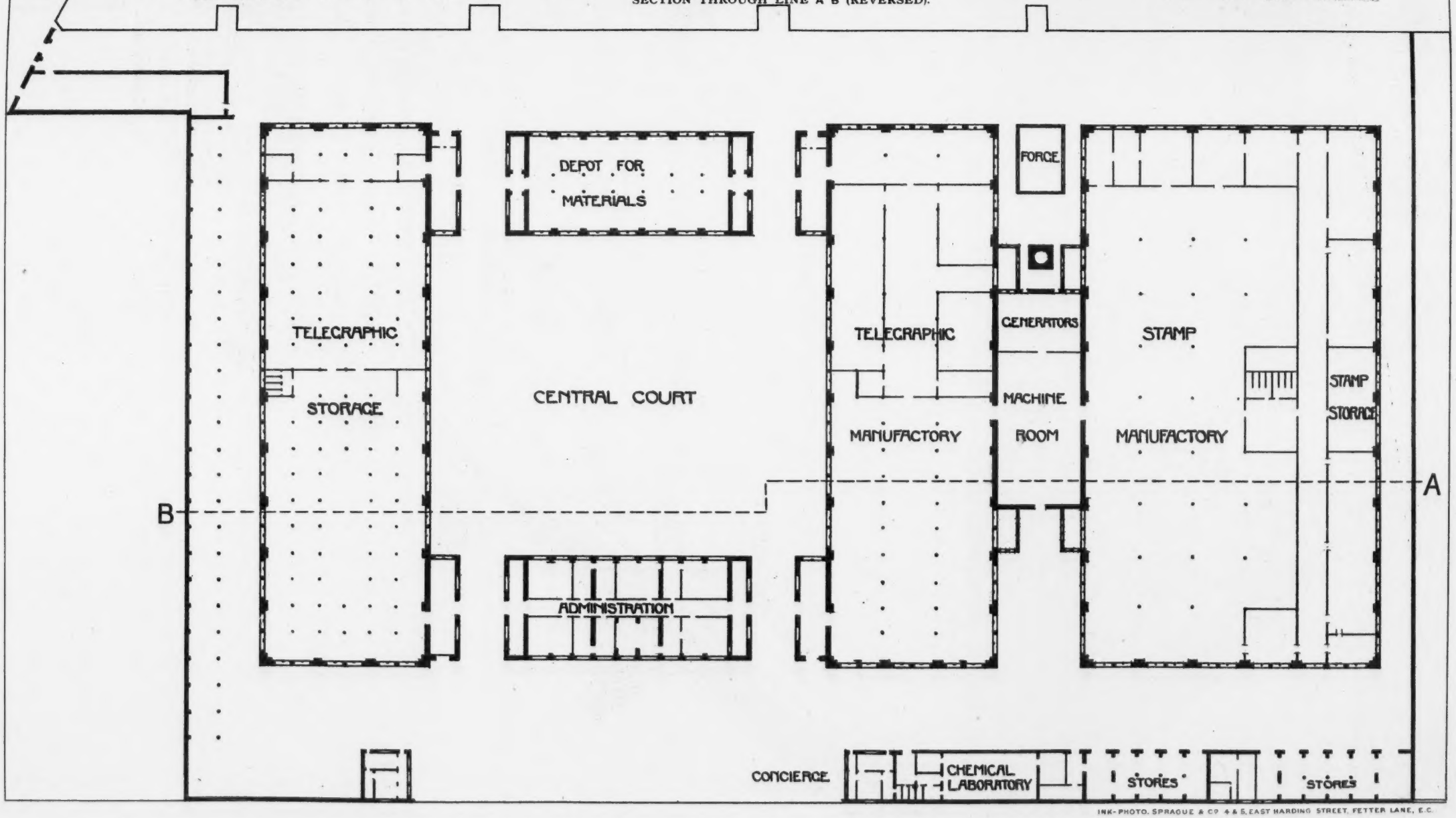

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